THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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JOSIAH TATUM,

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For the Farmers' Cabinet.

Corn-Stalk Sugar.

Mr. Editor,—I perceive by your last paper that J. M. C. has again called attention to the question of originality, which he raised in a former number respecting the plan I have proposed for making sugar from corn.

"Justice to himself," as he says, "requires such a course:" but this pursuit of an ignisfatuus which he fancies to be justice, has led him a very unprofitable and troublesome race from one quagmire of mistake and misunderstanding, into another. Every succeeding step has only served to make "confusion worse confounded." After all his labour to prove that there is "nothing new in the proposed plan," he suddenly finds out that "Mr. Webb himself makes not the least pretension to discovery of any sort, or even of improvement in any of the processes, whether of growing the corn or extracting and concentrating its juices."

This curious inference offers another illustration of the wonderful power of mental vision possessed by J. M. C., which I have had occasion before to notice. He sees things entirely invisible to everybody else.

"Optics sharp it takes, I ween,
To see what is not to be seen."

People of ordinary penetration do not consider it necessary to argue against a claim until some pretension is made to it; but Mr. C. not only demolishes the claim (in his own estimation) but proves at the same time that no claim is made!

He next asserts that the processes detailed in the essay are extremely "defective when compared with late improvements which might well be termed discoveries in the art of sugar-making; coming properly under the head of *refining*." This is very true, they do come properly under the head of refining, and for that reason could not properly be introduced into the essay. Those who manufacture sugar on a large scale should doubtless use vacuum pans and evaporate by steam, but as I have done nothing in this way, nothing was said about it; preferring rather to write on matters upon which I had some practical acquaintance;—The display of mere theoretical knowledge being apt to lead into difficulty, a fact which it appears that Mr. C. is not aware of.

In the course of the investigation some experiments were made with different quantities of lime, in order to ascertain as nearly as possible what proportion of this substance would best answer the purpose. The result was that no certain rule could be given about it; the experience of the manufacturer is the only thing to be depended upon—the varying strength of the lime, and the uncertain qualities of the juice will make a difference of more than a hundred per cent. in the quantity required. Accordingly it was stated in the essay that one and sometimes two tablespoonsful of milk of lime were added to a gallon of corn juice, and that both quantities were successfully used. This was given as a simple matter of fact, yet it is considered by Mr. C. as showing a "want of all judgment," and as proof positive that the "principle of defecation was neither understood nor practised."

Mr. D. L. Child, who lately visited the beet-sugar establishments of Europe, states that of "forty-three manufacturers whose methods he had an opportunity of observing, no two ever used the same quantity of lime;" the smallest quantity was 150 grains, and the largest 300 grains to the gallon of juice. He also states that experienced manufacturers never weigh it, but judge by the eye. This is all "*antiquated*" information to those who know any thing about the manufacture of sugar, but it is given for Mr. C.'s especial benefit. This "loose" mode of doing business proves, according to his notion, their "want of all judgment," and that they neither "understand nor practise the true principle of defecation." Under such circumstances the success of these French manufacturers in making sugar must be, to *him*, a matter "not easily to be accounted for."

As to the "precise point of concentration," of which he talks so much, I can only say that the point recommended was the one

which succeeded best with me after trying several others, both higher and lower. A higher concentration would have been better were it not that the syrup contained some substance which prevented speedy granulation. After standing some time, this foreign matter was removed, probably by deposit, as the crystallization, though tardy, has generally been very complete. If Mr. C. (as he strongly insinuates) possesses any more definite knowledge on the subject, I should be glad to hear it, and hereby call upon him for the information, which he will see the propriety of giving over his signature in full.

Should the manufacture of sugar from corn become a business of importance (of which there can be no doubt) it may be interesting to know how it originated. The discovery that a larger quantity of saccharine matter might be procured from this plant, if it was prevented from bearing grain, was made by M. Pallas, in 1839, and by myself in 1840. It was equally original in both cases. This was the first step in the business, and it appeared at the time to be all that was necessary for success. But from experiments made on a small scale, it appeared that only 100 or 200 pounds of sugar could be procured from an acre, corroborating the result obtained by M. Pallas, who states that corn treated in this way "contains crystallizable sugar in quantity very often double that obtained when the plant is allowed to mature with the seed;" so that the only remuneration for sacrificing the grain, is an increased portion of sugar just equal to that which might have been procured had the ears been left untouched. There is no evidence that the investigation has ever proceeded beyond this point in France, the small yield having perhaps proved discouraging.

I have found that the quantity of sugar produced on a given space of ground, is in proportion to the number of stalks cultivated upon it, subject of course to certain limits. Knowledge of this fact is necessary before the first discovery can be applied to *any practical purpose*. This was plainly stated in the essay, but it would appear not "plain enough" for Mr. C.

The extracts published in the Cabinet contain no directions about the planting and cultivation;—those who undertake the business without some information on these points, will not succeed; and although the simplicity of the thing may be sufficient evidence to Mr. C. of its unimportance, it will be found that attention to it will make all the difference between success and failure.

The ridiculous story about the toddy-making Indians, has been shown to be *totally* unworthy of credit, which Mr. C. has admitted, yet he again brings it up, and appears determined to identify himself with his authority. This is a very unfortunate association for him; but as the Scotch proverb has it, "A wilfu' man maun hae his ain way." Opposition on this point being fruitless, it will not be attempted.

In conclusion, I would remark that I have no objection to criticism or discussion. When conducted in a proper spirit, they can lead to none but good results. The preservation of good-humour, however, is all-important, and should be particularly attended to. Whether Mr. C. has paid due regard to this, or whether he has not, your readers can determine. His first essay contained a charge of false pretensions, and in his last the accusation was reiterated. This course does not appear to me to be the one best calculated to foster friendly feelings, and lead to temperate discussion; I answer that the charge is not true; but Mr. C. may reply that this is also a false pretension, so that his *argument* on this point is impregnable. Cowper's consolation under such unanswerable attacks, shows true philosophy:

> A moral, sensible, and well-bred man
> Will not affront me, and no other can.

A charge against one's veracity it is impossible to answer in *words*, and for that reason there is an impropriety in making it. Let each one gain the best character he can by his *actions*, and in all discussions confine the dispute to matters which can be *settled* by words.

Wm. Webb.

Woodland, near Wilmington, Del., June 1st, 1842.

P. S. to the Editor—

Dear Sir,—I should be glad to offer you a welcome to Woodland, whenever other engagements will allow you to make the visit. We have not much to *show*, but perhaps there may be enough of something else to make it agreeable. Your knowledge and experience in this sugar business would be of the highest importance to me, and I would like very much to avail myself of them. I cannot close without saying a word about the "Farmers' Land Measurer"—you have truly done the "State some service" in its publication. The careful cultivator will find it first *agreeable*, then *useful*, and at last *necessary* to the satisfactory carrying on of his business. If all who need the book will buy it, the demand will be very great. Respectfully yours,

Wm. Webb.

It will afford us real gratification to be of service to our interesting and amiable young friend; the readers of the Cabinet are much indebted to him for his articles on the exciting topic of which they treat. We hope he has a good breadth of corn under cultivation the present year, and that the season will prove propitious for the full developement of the experiment. May perfect success attend his patriotic exertions, and a corresponding rich reward. Editor.

For the Farmers' Cabinet.

The Dairy.

Mr. Editor,—There is no one who loves to read "all about farming" better than I do, nor is any one more ready to admit, that for a single dollar a year spent in the subscription to an agricultural periodical, we may often derive information of the value of hundreds; but really, we now and then meet with strange accounts in the pages of some of these journals, when detailing their crops of beets, corn, potatoes, &c., and to which I would add *butter*, as I have at this time my attention turned to that item, by the perusal of an article in the "Central New York Farmer," a work published at Rome, Oneida county, in which the writer, after acknowledging the enjoyment which he has experienced in the hospitality of Col. J. M. Sherwood, proceeds to describe the Colonel's "choice lot of shorthorns," to which I am sure I have no objection, for I can readily believe that to one at all acquainted with, or interested in the breed of live stock, such an opportunity must have been a real treat. He particularizes the cow Daisy, as a great milker, from whom 17 lbs. of butter have been made per week; and remarks, that "this is evidence of her sustaining the character awarded to the Durhams in the London markets, of being the best *milkers* that can be had." But this is a *butter* cow, and it by no means follows that she is, therefore, a great *milker*, for which peculiar property cows are preferred in the London dairies; nor are they preferred, even there, for their milking properties *alone*, another object being, to procure those animals which, after being milked for a season, will come earliest to the butcher, and return a considerable portion of the first purchase-money in the shape of beef, to which purpose they are uniformly devoted when they go dry, no dairyman, or more properly, milkman, ever thinking of rearing calves, even from his very best cows, the most valuable of them being devoted to the butcher, oftentimes without extra feeding—a circumstance perhaps not generally known to persons in this country. Now, without saying more than that 17 lbs. of butter per week is a very large quantity to be made from one cow, I would pass on to the writer's interesting inquiry—"Why should the farmer stock his farm with inferior cows (!) from which he can realize only 8 or 10 pounds of butter per week, when by a *little* care and attention he might obtain those which would yield him double that quantity? Surely no good reason can be given; and yet it is extremely difficult to induce *farmers* to step out of their ordinary track to accomplish an improvement of such vital importance to their best interests." Upon this very singular passage I had intended to make some remarks, but it is so *outre* that I would merely ask the Editors of the Central New York Farmer—a work, by the bye, which bids fair to become one of our leading journals—if they can inform us what *trade* the writer of the above article happens to be? Certainly he is no farmer; and if it be added, he will never become one, it ought not to be deemed a harsh conclusion. It is in perfect keeping, when he says, "When our farmers have before them the evidence of their senses to convince them, they will, it is presumed, avail themselves of the opportunities offered; and but a short time will have elapsed before we shall witness an entire change in the appearance of the stock in that section of country." He adds: "We were very much gratified with our visit, and we hope ere long to renew it," in which hope I cordially join, as it will afford him a little experience in the matter, of which he seems to stand wofully in need.

Now, I live in a dairy country, and yet I have never seen a cow that would give 17 lbs. of butter a week, let alone 20; though, to be sure, an extra 3 pounds per week, after once the Rubicon is passed, would not be a very great matter! No, mine are all inferior cows—mere 8 and 10 pounders—and so are my neighbours'; but we only want "the evidence of our own senses to convince us;" when it is *presumed* we shall be glad to avail ourselves of any opportunity that may offer, for working an entire change in our circumstances, although in the opinion of the above writer, it is extremely difficult to induce *farmers* to step out of their ordinary track to accomplish any improvement of vital importance to their own interests. This state of things is no doubt sincerely deplored by our friends of the quill; but I hardly know how to render farmers less obtuse and obdurate, unless they would set to work and fabricate a number of these creamers, and exhibit to our sober senses their ability to make 18 or 20 pounds of butter per week;—then, I guess they would not lie long on hand, difficult as it is to induce *farmers* to step out of their ordinary jog-trot to accomplish any improvement, be it even to their vital interest to do so. There is a little *jeu d'esprit*, on the way in which matters are sometimes dished up for the farmers, at p. 34 of the 5th vol. of the Cabinet, which is worth re-perusing; and with its closing remark I shall conclude.

"Seriously, we have too much of this sort of trash mixed up in our agricultural reading; it might be amusing to others, but to practical men it is anything but interesting, and often operates as an antidote to matter of much more importance, when met in conjunction with it."

May 29, 1842. Jacob List.

For the Farmers' Cabinet.

Happiness.

Every employment, calling, or pursuit, that the mind can suggest, is tried in the search after happiness. It seems to be almost an universal opinion, that whoever has least care, trouble and sorrow, and enjoys most the blessings of health and contentment, with a reasonable share of the smiles of fortune, enjoys most *happiness*. But in what employment or profession shall we look for all these blessings? Not in the mercantile life, where, oftentimes, our destinies hang by a single thread; not in the busy whirl of politics, where all is commotion and confusion; not in the employment of a soldier, dealing in the lives of his fellow-men. No — but we may find them among the cultivators of the soil; with him who is neither dependent on the charities of his fellow-men, nor harassed with the care of immense possessions; who neither bows to riches, nor spurns honest and virtuous poverty.

The cultivation of the soil is a noble employment! The farmer may be called God's nobleman, for he labours in his vineyard and enjoys from him peculiar blessings. A glorious independence is his; he is happy in making the living things that are under his dominion happy; he walks over his verdant and grassy meadows, and inhales the fresh breeze laden with the perfume of flowers, and is greeted on every side by the kind and cheerful looks of his domestic animals: even the feathered songsters of the grove, accustomed to his presence, regale him with their sweetest melody, and scarcely hop out of his path as he passes along. The scenes that are ever before him are calculated to lead him to the contemplation of that "Source divine whence all his blessings flow."

The nursery of greatness is in the hills and valleys; from them many of our most eminent bards, divines and statesmen, have sprung, and of these we have numerous examples, both in ancient times and in the present day. Agriculture was a favourite employment amongst the Romans, Grecians, and Egyptians. Cincinnatus was called from his plough to rule over a rebellious people, and after restoring their turbulent spirits to peace, and creating harmony amongst them, he again *returned* to his plough. Franklin, although not a practical farmer, yet delighted in agriculture, and mankind owe him a great debt for his valuable improvements in the science. But the brightest example is Washington! He was not only a theoretical, but also a practical farmer. We are told that he delighted to see his wheat-crowned fields waving in golden ridges before the wanton breeze, and gaze upon his verdant hills and meadows spotted with flocks and herds; and that whenever opportunity offered, he would retire from the turmoils of war, or the busy affairs of state, to seek repose upon his beloved farm.

Agriculturists are the pillars on which the nation rests, and agriculture is the great source of individual and national prosperity: on it depends, in a great degree, both manufactures and commerce. The farmer may sit by his domestic hearth and listen to the shock in pecuniary affairs, and feel secure. Surrounded with plenty, he can smile upon them all; his farm is to him a little world; it supplies him with all the *necessaries* of life, and he wants no more. M.

Hillside, April 28, 1842.

The Evils of War.

The physical evils of war defy calculation or estimate; but the climax of its mischiefs will be found in its *moral* results. Some of its evils are in its spirit of malice, its deeds of rapacity, its wrath, its revenge, and in unbridled lust! (See the horrors of this sort following the siege and capture of the city of Badajos by Wellington.) War is steeped in malevolence, it reeks with pollution; it is a mass of sin, a system of gigantic wholesale wickedness; it is a hotbed of the foulest, fiercest, deadliest passions; it teaches man to harm and to hate his fellow man; it makes the slaughter and destruction of mankind a science, a profession, a livelihood, a support, and a road to fame, wealth and power! The war system incorporates every vice, and excludes nearly every virtue. It is a concentration of nearly all crimes, injustice, fraud, theft, robbery, violence, rapine, lust and murder. There is nowhere seen such a theatre of unmingled, unmitigated, outrageous cruelty and crime as a field of battle, if we except therefrom the exhibit of a city taken by storm, and given up by the conquerors to be sacked, devastated, and its inhabitants abandoned to massacre and ruthless, relentless destruction. War debases the intellect by engaging it in the pursuit of a very large proportion of the evils wherewith mankind can be afflicted; it sears the conscience, it steels the heart, it brutalizes the soul!—It is one vast laboratory of mischief. It blunts the whole of the spiritual feelings; it destroys every sound sentiment of religion; it withdraws multitudes from all thought of their Creator and their God; it sinks them into the lowest pits of sin: in a word, it is in every form and aspect, in all its details, totally opposed to the Christian religion, the divine life, the doctrines of the gospel, the life and example of the Saviour, and the commands of the Almighty.—*Ledger.*

For the Farmers' Cabinet.

Oxen in Harness.

Mr. Editor, — Is there any reason why oxen should not be made to work in harness as well as in yokes? I have repeatedly asked this question, but have never yet met with a valid objection to the *innovation*, as it is termed, although much has been urged and strenuously insisted upon, on the ground that it would be found impracticable and impossible. I am not, however, convinced that it is so, but rather, I feel quite certain that the substitution of collars for yokes would be advantageous in every way, both to man and beast. The subject has of late been impressed upon my mind, by witnessing the extreme awkwardness of the adaptation of the yoke to the plough, as well as to several other labours to which the ox is devoted; but in which his motions and freedom of action are reduced almost to a piece of machinery, by the everlasting yoke upon his neck, oftentimes a weight of itself sufficient for a load for a single beast; and to which it is customary to add half a hundred weight of iron—merely, I presume, to ascertain how much the poor brutes can be made to bear up against. I was present a few days ago at a discussion of the subject, and would place the arguments for and against the yoke on record, so far as I can remember them.

C. I wonder why oxen cannot be used in collars as well as yokes?

D. Oh, they would not be found to do at all.

C. Did you ever see the trial made?

D. No, but I know it would never do.

C. Well, I have seen it tried, and it was found to do exceedingly well. I wonder who first thought of putting a yoke, the size of a tree, upon the poor animals' necks for them to push up against?

D. Don't you see it is an ordination of nature? — the hump of the neck being made on purpose to receive the pressure, like a natural pad.

C. Exactly the argument which is used by the inhabitants of the islands of the Hebrides, for hitching their horses to the plough by their tails! "What else," ask they, "is the tail made for? It is an *ordination of nature*; there can be no question about it." But I cannot see that nature or reason has anything to do with a practice so cruel and so bungling.

D. Oh, I have no doubt that upon trial it will be found the best and easiest method of fixing it; however, I have never seen or heard of any other until now.

C. At page 152 of the Cabinet, vol. 2, it is said, the French method — that of drawing from a board strapped across the forehead, has been found far preferable to the yoke, the cattle being easily broke to the method; stepping out very light and free; and although sorely pressed by way of experiment on a broiling summer's day, they worked quite easily, in a labour that would have sorely distressed them if in yoke, each ox working separately.

D. But that is not in collar, as you recommend.

C. True, and is not near so complete; for there, too, each animal would be separate, after which it would enjoy the freedom of its head as well as its neck. Only think for a moment, of the weight of a broad, thick piece of wood, the length of the thickness of its carcase, the stuffing and strapping, besides the iron hooks for the traces to be hitched to, all hanging at the forehead of the poor beast, for ten hours a day!

D. Oh, they don't mind the yoke when they get used to it.

C. No more do eels mind skinning when they get used to it. But who told you they do not mind it? I guess that custom would never enable us to bear anything so frightfully painful, wearisome and inconvenient, as a yoke on our necks for so many hours without complaining, if we had the power to express ourselves.

D. Well, did you ever see oxen work in collars?

C. Repeatedly; a great many teams, both single and double, come daily into London from the surrounding country, and traverse the streets, both in carts and wagons, with the greatest ease and convenience, exhibiting all the tractability of the horse, and the same power of putting back the load and of going forward; with blind bridles, but without bits in their mouths, and collars, stuffed in a different manner from those of the horse; opening on the top and confined with a strap and buckle, and their feet shod with double shoes; in which state they are equal to horses in all but pace; as easily guided and in every way as convenient. And at plough, they are a thousand times more convenient in collars than in yokes; turning at the ends of the lands in half the time and with half the labour, and going through a day's work with half the exertion.

D. Well, I don't see the need of changing what has been in use for so many years.

C. Then, of course, you still adhere to the tinder-box and flint and steel, and have not "changed" them for a box of Lucifer matches.

D. Oh, but that change for the better was so apparent.

C. To me, not half so apparent as the change from the yoke to the collar, because, of so much more importance in the saving of expense and suffering.

D. But the yoke is so much cheaper than the collar and harness.

C. True, and I am willing that you should debit every crop which you raise by their means, with an extra two cents per acre — that being, I calculate, about the extra expense incurred, and which would cover it.

D. Then, it is so much more labour and trouble to gear up with the collars and harness than with the yoke, that I guess I shall go on as I am.

C. Yes, that is exactly the conclusion to which I expected we should arrive, for to that point have all the arguments that I have heard, come at last; and, but for the shame of it, it would no doubt form the first objecjection to the substitution of the collar for the yoke.

Vir.

Agricultural Production Impossible without Manure.

The first care of a man, who devotes his capital in obtaining productions of the earth, is that the earth should have fecundity, that is to say, that it should be fit for the production of plants.

Plants, like animals, are beings who have life, who are possessed of organs and vessels, in which circulates a fluid, and which, aided by an appropriate nourishment, develope an organic mass, in a given time.

Of two kinds of earth, the most fruitful will be that, which in the same time will have produced the most considerable weight of organic mass, reduced to a dry state; and the production will be as much more advantageous to the cultivator, as it will be sought for, and of a higher price.

Plants, to accomplish their life, to arrive to the state of being organic, have absolutely need of manure, the result of the decomposition of other vegetable, or animal, organic matter spread upon the surface of the earth. An organic body can be born only of the elements of organic substances.

These matters, most generally of a vegetable nature, have been also of plants, and have owed being obtained, to cultivation; therefore it is truth to say, that to obtain of the earth productions of a certain weight, it is necessary, previously to dispose in its bosom the remains of other plants having had life also; and often it happens, that the weight of the matter to be converted into manure, ought to be equal to that of the plant to be obtained; in other terms, when one wishes to obtain from a field, which has no trace of manure, a production of given weight, it is necessary to carry and place in this field other organic matters, produced elsewhere, and of an equal weight; and if this obtained production is carried entirely out of the field and sold, it will be necessary, if one wishes to obtain of it still a like production, to carry again into this field the same weight of organic matter obtained by cultivation upon another field.

All manure put into the earth ought to be in a state of humus, soluble in water, so that the juices of plants can seize upon it and appropriate it to themselves. Manure consists of all the elements of vegetable matter. As soon as it is soluble, the roots absorb it and communicate it to the interior organs of the plant which secretes it in the parts of which it has need to develope itself.

Thus the more a piece of land is mixed with soluble manure, the more it produces plants and vegetable qualifications; only the consumption of the manure is not the same.

There are plants, which, although imparting to the earth a part of their nourishment by the means of their roots sunk into the earth, appropriate to themselves also a great quantity of atmospheric substances by means of their leaves, their aerial roots, and have, besides, this great advantage, that even when they are carried out of the field, they have there still, by means of their stubble, and of their numerous fleshy roots, as much, and sometimes more, organic matter than they have consumed for their growth. If one leaves them in the field, and covers, as it sometimes happens, the entire body of the plant in the earth, they recover the juices that it has furnished, and will give more in equivalent richness of nutritive principles, than the hidden plants had drawn from the atmosphere.

It is owing to this admirable property of certain plants to produce more matter than they absorb of humus from the earth, that it is possible to maintain the fertility of a piece of ground in rendering to it only a part of that which it has produced, that is to say, in directing a portion to indemnify itself of its expense and trouble.

If plants live only by the humus spread upon the earth, we should be obliged to replace the production which we have not converted into manure, by a proportionate quantity of vegetables cultivated in another piece of land; and if it was thus, the strength of vegetation would diminish little by little, and the money consecrated to the cultivation of the soil would be lost.

Some plants, with large leaves, which do not appertain to the leguminous family, have some of their properties, those which deprive the soil of less of the humus than it contains, and impart more new humus by their remains, are those which possess these properties in the highest degree.

We can now divide the plants into four classes, with respect to the more or less in-

fluence which they have over the nutritive juices of the earth. First, those which exhaust much; second, those which exhaust the least; third, those which enrich much; fourth, those which enrich the least.

Plants which require much manure, occupying the earth more than a year sometimes, and not absolutely rendering anything to the soil for that which they have drawn from it, are eminently weakening.

Plants which have not all these effects, are weakening in a less degree. To the class the most weakening, belong hops, madder, hemp, poppy, flax, nursery plants, and colsa.

To the class of plants which weaken in a less degree, belong cabbages, turnips, red beets, potatoes, cereales of autumn, cereales of spring. Wheat weakens less than rye; barley weakens as much as rye; oats weaken as much as wheat, at an equal weight. But there is this difference between grain of autumn and that of spring, that the first, besides weakening, wastes the soil, as I shall have occasion to say hereafter.

Let us speak now of plants which weaken the earth, which absorb its nourishing juices, or which restore them to it; let us speak furthermore, of those which waste, or improve, the intimate composition of the earth. It is necessary to seize upon this distinction, between these two different effects, produced by the plants upon the soil. There are plants which weaken and waste the earth at the same time; others, on the contrary, which in weakening the soil of all its nourishing juices, improve its nature; others finally, which enrich and improve. We see that this augmentation, or diminution of the nourishing juices, is called augmentation or diminution of richness, and that the improvement or the waste of the nature of the soil is called augmentation or diminution of power.

Plants which are wholly covered, or which, having occupied the soil for many years, have enriched it by their remains, and by fertilizing substances, drawn from the atmosphere, are eminently enriching.

Plants are as much less enriching, as they have drawn less from the atmosphere as they have given to the earth a smaller quantity of their remains, consequently they are as much less enriching, as their vegetation would have been less leafy, less vigorous, less compact, and that one would have covered a smaller quantity.

To the class of plants the most enriching, belong, of the first rank, lucerne and sanfoin, well trimmed, which have lasted many years; it is necessary that they should have been broken before they had decayed; clover, well prospered, which one has planted in full growth; green turf, lupine, spergule, fitch, rape seed, bean, buckwheat, rye, covered.

To the class of plants which enrich in a less degree, belong the leguminous harvest, clover, peas, fitch, beans; enriching themselves only as much as they have been not only vigorous, but thick, which happens only in fields in a good state.—*Boston Cult.*

Barley.

Barley should be sown as early in spring as the ground can be well fitted for its reception. We have known it sown from April to June: but it may be observed, as a general rule, that on soils equally prepared, the early sown grain always gives the best samples. From the 1st to the 15th of May may be considered the usual time of sowing. It rarely suffers from spring frosts.

Any soil that will produce good roots, or clover, will grow barley. It should be rich and friable, moist, but not wet. Cold, heavy, tenacious soils are unfit for this crop. Stagnant water is destructive to it.

Barley succeeds best after hoed crops, potatoes, turnips, or corn, crops that require heavy manuring, and keep the ground clean. Manure, applied directly to this crop, is not advisable, as it gives too much straw, is apt to lodge it, and injures the berry. It is frequently sown on clover sward; and in all cases, the soil must be made fine for the reception of the seed.

Thin skinned, plump, and rather pale seed is to be selected. Soaking the seed in a weak solution of nitre, for twenty-four hours, has proved of great service. We use from two to two and a half bushels per acre. Poor soils require more seed than rich ones, as the plants do not tiller so much. In England, greater quantities of seed are used than here, from three to four bushels being the amount recommended.

Barley should never stand, before cutting, until it is *dead ripe*. When the ears drop and bend down to the stems, and lose their previous reddish cast, barley should be cut. The straw will now be of a yellow colour, and if allowed to stand longer, becomes brittle, the heads break off, and thus easily wastes. Cut early, the berry will be finer and of brighter colour than if allowed to stand longer.

Barley is a good food for any animal, but is generally grown for the purpose of making pork, for which it is only exceeded by corn. Barley, if fed to horses, should be ground, and fed with cut straw. If given them in the same manner and quantity as oats, it is apt to produce fever, a proof that its nutritive powers are great, and that some more bulky substance is required for the distention of the stomach.

To the Editor of the Farmers' Cabinet.

Change of Seed.

I was lately looking over the back volumes of the "Cabinet," when my attention was arrested by an article headed "Change of Soil a Change of Seed," vol. 5, page 336, signed J. M. Now, that a change of soil is a change of seed, or that it is requisite to change seed in order to insure a good crop, I must say, I am not yet altogether prepared to admit. J. M. asserts, that "the Foxite potatoe, which has been grown for many years in New Jersey, where the crop has for some time past suffered a regular diminution in quantity, is quite renovated by a removal to the neighbourhood of Spring Mill, Montgomery county, where it has uniformly yielded double the quantity of the Mercers." He also suggests the propriety of farmers changing their seed every year. Now, I believe the first Foxite potatoes were introduced in the neighbourhood of Philadelphia, by a gentleman near Camden, N. J., about the year 1812 or '13, and have been cultivated on the same farm every year since without a change of seed, and with a result very different from that stated by your correspondent: their superior quality is still maintained, their appearance greatly improved, and the crop increased about one half. I have cultivated both Foxites and Mercers, side by side, for many years, the Foxites uniformly yielding the heaviest crop. In the year 1838, my Foxites yielded a very large crop; the Mercers were a total failure: the Foxite seed was never changed; the Mercers have been changed repeatedly. One or two more *facts*, and I have done.

The late Joseph Cooper, of Camden, N. J., more than fifty years ago, cultivated a long green squash on his farm; and the same variety, I am told, has been ever since cultivated there, without any perceptible deterioration. The same may also be said of the "Cooper corn," which originated with him.

Q.

Gloucester Co., N. J., May 2, 1842.

Relative Weight of Grain and Cob of Indian-Corn.

Editor Kentucky Farmer,—In looking over your interesting periodical, I sometimes meet with notices of fine ears of corn produced in our country. Now, in order to enable your readers to understand precisely how good they were, it seems to me that your correspondents should, in describing them, give us the exact weight of the corn both on the cob and when shelled, as this would afford a very certain standard. The length or girth of the ear, the number of rows or grains, are too uncertain measures by which to determine the excellence of an ear of Indian-corn. A reflection of this kind led me while gathering my corn to make the following experiment:

On the 17th November last, without any very great care, I selected twelve of the most remarkable ears that were convenient to hand. The whole, being quite dry, weighed thirteen pounds good weight on the cob. The longest ear, measuring 13 inches in length, but only 5⅞ inches in circumference, was the lightest of the twelve, and contained 742 grains. The shortest ear, measuring 8½ inches in length and 8¼ inches in girth, had 22 rows and about 1100 grains—the greatest number of grains on any of the twelve—but the ear was much lighter than many others of the dozen. The heaviest and best ear of all, measured only 9 inches in length and 8½ inches in girth, containing 18 rows and about 846 grains; it weighed 1 lb. 3¼ ozs. unshelled; the corn when shelled weighed 15½ ozs. I did not consider this a very remarkable ear for size; but the experiment shows how much the eye may deceive us as to the relative value of an ear of corn. Among the dozen there was one ear, selected by several as being decidedly the finest and best; and certainly its appearance was prepossessing, being 12 inches long and 7¼ inches in circumference, containing only 14 rows and about 700 grains, which, however, were very large, wide and full. This ear was the second in weight—mark that—weighing 1 lb. 3 ozs.; the corn it shelled weighed 14¼ ozs., having a much heavier cob than its successful competitor. The description of corn is the white flint, and considering that the past season was not the best for corn, I think mine tolerably good. The above experiment has suggested to my mind an important improvement that I think may be made in corn. I intend to try it, and if I succeed, will in due time inform you as to the result.

Jno. Allen Gano.

Animal Matter and Peat.—"There are other sources of alkali, for converting peat into soluble matter. Of these the chief is animal matter. Here we have ammonia produced. It has been actually proved by experiment, that a dead horse can convert 20 tons (or cubic yards) of peat into a valuable manure, richer and more lasting than stable dung;—"a barrel of alewives is equal to a wagon load of peat." The next great and prolific source of ammonia is urine. The urine of one cow for a winter, mixed up as it is daily collected, with peat, is sufficient to manure half an acre of land with 20 loads of manure of the best quality, while her solid evacuations and litter, for the same period, afford only 17 loads, whose value is only about one half that of the former."—*Dana.*

THE HEREFORDSHIRE COW.

The above is the portrait of a beautiful cow, the property of the Earl of Egremont. The Hereford cow is comparatively small and delicate; she is very light in flesh when in common condition, and beyond that state, while in breeding, she is never suffered to proceed; but when she is up for fatting, she spreads out and accumulates fat at a most extraordinary rate. The Herefords fatten to a much greater weight than the Devons, the cows weighing from 1000 to 1400 lbs. the four quarters. A cow belonging to the Duke of Bedford weighed more than this; but they are far worse milkers than the Devons; and this is so generally acknowledged, that while there are many dairies of Devons in many parts of the country (none of which are however very profitable to their owners), a dairy of Herefords is rarely to be found; but to compensate for this, they are kindly feeders and their meat is finely grained and beautifully marbled, and few cattle are more highly prized in the market. In the choice of a cow, the breeder does not value or select her, or breed from her, for her milking properties or the price which the grazier would give for her, but in proportion as she possesses that general form, which experience has taught him will render her likely to produce a capital ox; hence, she is often small, and, what some would be apt to call her, ill-made, but her purchaser has been taught by experience, that when a cow, although somewhat roomy, is too large and masculine, she is apt to bring an ox that will prove brawny and coarse, and sluggish at work; as also, unkind and slow in the process of fattening; and these are objections which, most of all, he would be unwilling to encounter. The cow is, therefore, often somewhat undersized; but it not unfrequently happens that she produces an ox that is three times her size and weight. Thus, the dairy has been comparatively neglected in Hereford, for experience has proved, that the breeding qualities of a cow are materially lessened, and even her form is deteriorated, by her being inclined to give a large quantity of milk. The Hereford breeder has never entertained the idea that the properties of milk and beef could be united in the same race; he has long been convinced that they are incompatible, although individual instances to the contrary might sometimes be cited; and is therefore satisfied with the distinction of rearing one of the finest breeds of beef cattle in England, leaving to other counties the triumphs of the dairy, whether that be in the production of butter or cheese.

The hide of the Hereford is considerably thicker than that of the Devon; they are shorter in the leg, and also in the carcase; higher and broader and heavier in the chine; rounder and wider across the hips, and better covered with fat; the thigh fuller and more muscular, and the shoulders larger and coarser. They are both excellent breeds, and the prejudices of the Devonshire and Herefordshire farmers for their peculiar breed being set aside, a cross of the one would often materially improve the other; the Devon acquiring bulk and hardihood, the Hereford a finer form and greater activity. The Michaelmas cattle fair at Hereford is not exceeded by any show of beasts in good condition in England; they are sold to the graziers expressly for the London market.

Culture of the Peach.

The most extensive peach orchard which has come to my knowledge, is that belonging to Messrs. Isaac Reeve and Jacob Ridgway, of Philadelphia. It is situated forty-five miles below the city, on the river Delaware, at Delaware city, and contains 200 acres of trees, in different stages of growth. In 1839, they gathered from this orchard 18,000 bushels of first rate fruit from 170 acres of trees, whereof only 50 acres were then in full bearing. When the fruit has attained the size of a small musket-ball, it is thinned. One of those gentlemen informed me, that of that small size, they had gathered in that year, 700 bushels, by measure, of the immature fruit. By this judicious management, while the amount of fruit was but little diminished, either in weight or measure — its size and beauty were thus greatly improved, so that their fruit was the handsomest in the Philadelphia market, and during the best of the season much of it was sold at from $4 50 to $6 the basket of three pecks in measure. Since that period, they have increased their orchards, which now comprise 300 acres. Their trees are usually transplanted at a year's growth from the bud; they usually produce a full crop of fruit in the fourth year after being transplanted, and from some of their trees two bushels of fruit have been gathered in a single year. They prefer a dry soil, light and friable, on a foundation of clay, or gravelly clay; a good, but not a very rich soil. Like all other cultivators, the whole land is always kept in cultivation. For the first two or three years, corn is raised in the orchard, but afterwards the trees are permitted to occupy the whole ground, nothing being suffered to grow beneath their shade, as this would rob the fruit of its nourishment. In Delaware, where the climate is warm, and the soil good, twenty feet asunder is the suitable distance recommended for the tree; while on the eastern or Atlantic side of New Jersey, sixteen or seventeen feet is deemed sufficient by some of their most experienced cultivators on good soils; while farther north, or on poorer soils, a less distance will suffice. Even ten feet asunder answers well in the latitude of Boston.

The blossoms of the peach trees, as well as those of the cherry, are sometimes liable to be cut off by winter, or by spring frosts, which occur after the sap has arisen; the danger in this case being caused by the occurrence of very warm weather, either during an open winter, or during the progress of a very early spring, which causes the tree to advance prematurely. Those trees being more especially exposed which are in warm and sunny situations, while those trees which are situated on the north sides of hills, the most exposed to cold winds, and on the north sides of fences and of buildings, almost invariably escape. In Switzerland, it has been stated that a mound of earth is sometimes placed over the roots of trees in autumn, as a protection from winter frost, which is removed in spring. Completely to protect the tree, and to insure a crop of fruit in all situations and seasons, let the surface of the earth beneath the tree be covered to the depth of eight or twelve inches, either with leaves, or coarse, strawy manure, or with coarse hay in January and February, and when hard frozen. This will preserve the ground in a frozen state, and effectually retard the advancement of the tree till the danger is past, and to a late period in spring.

The peach flourishes and ripens well its fruit usually wherever and as far north as the Indian-corn or maize will produce a certain crop. But by attending to the above directions, we are persuaded that it will succeed and flourish, producing fruit perfect and mature, and abundantly even still farther north. It is eminently deserving of trial.—*Kenrick's New Am. Orchardist.*

To the Editor of the Farmers' Cabinet.

The Olive Tree.

Esteemed Friend, — I do not know that this tree has ever been introduced into any part of the United States, but I consider the cultivation of it in the Southern States of far more value than the morus multicaulus in the Middle States. As an article of food, the olive oil is considered preferable to animal fat; but it ought always to be mild, fresh, and of a sweet taste. And having in my hands the following excellent observations upon the culture of this tree, addressed by Thomas Jefferson, in 1787, to the Agricultural Society of Charleston, South Carolina, I make an extract therefrom for the pages of the Cabinet. If worthy, please insert, and oblige

A Subscriber.

"The olive is a tree the least known in America, and yet the most worthy of being known. Of all the gifts of heaven to man, it is *next* to the most precious, if not the *most* precious. Perhaps it may claim a preference even to bread, because there is such an infinitude of vegetables, which it renders a proper and comfortable nourishment. In passing the Alps at the Colde Tende, where they are mere masses of rock, wherever there happens to be a little soil, there are a number of olive trees, and a village supported by them. Take away these trees, and the same ground in corn would not support a single family. A pound of oil, which can be bought for 3*d* or 4*d* sterling, is equivalent to many pounds of

flesh, by the quantity of vegetables it will prepare, and render fit and comfortable food. Without this tree, the county of Provence and territory of Genoa would not support one half, perhaps not one-third, of their present inhabitants. The nature of the soil is of little consequence if it be dry. The trees are planted from 15 to 20 feet apart, and when tolerably good, will yield 15 to 20 lbs. of oil yearly, one with another; but there are trees which yield much more. They begin to render good crops at 20 years old, and last until killed by cold, which will happen at some time or other, even in their best positions, in France; but they put out again from their roots. In Italy, I am told, they have trees 200 years old. They afford an easy employment, and require so little nourishment, that if the soil be fit for any other production, it may be cultivated among the olive trees without injuring them. The northern limits of this tree are the mountains of Cevennes, from about the meridian of Carcassonne to the Rhone: from thence to the Alps and Appenines, as far as Genoa, I know, and how much farther I am not informed. The shelter of these mountains may be considered as equivalent to a degree and a half of latitude, at least, because, westward of the commencement of the Cevennes, there are no olive trees in 43½° or even in 43° of latitude, whereas we find them now on the Rhone at Pierrelette in 44½°, and formerly they were at Tains above the mouth of the Isere in 45°, sheltered by the near approach of Cevennes and Alps, which only leave there a passage for the Rhone. Whether such a shelter exists or not in the southern states, I know not; but this we may say, that either it exists or is not necessary there, because we know they produce the orange in open air, and wherever the orange will stand at all, experience shows the olive will stand well, and be a much hardier tree. Notwithstanding the great quantity of oil made in France, they have not enough for their own consumption, and therefore import from other countries. This is an article that will always keep pace with its productions. Raise it, and it begets its own demand. Little is carried to America, because Europe has it not to spare; we therefore have not learnt the use of it. But cover the Southern States with it, and every man will become a consumer of it within whose reach it can be brought in point of price. If the memory of those persons be held in great respect in the Southern States who introduced there the culture of rice, what obligation would be due to him who should introduce the olive tree and set the example of its culture! Having myself been an eye-witness to the blessings which this tree sheds on the poor, I never had my wishes so kindled for the introduction of any article of new culture into our own country. South Carolina, and those states south of Carolina, appear to me to be the states wherein its success, in favoured positions at least, could not be doubted; and I flatter myself it would come within the views of the Society for the encouragement of Agriculture, to begin the experiments which are to prove its practicability. Carcassonne is the place from which the plants may be most certainly and cheaply obtained; they can be sent from thence by water to Bordeaux, where they may be embarked on vessels bound for the Southern States."

A Princely Establishment.

THERE is, probably, not so splendid a country estate in America, as that described in the following article from the Farmer's Visitor. It is situated at Watertown, seven miles from Boston, and belongs to J. P. Cushing, Esq.

"Mr. Cushing's garden is a most enchanting and delightful spot; it is the same spot, two and a half miles south of West Cambridge centre, upon the heights of Watertown, which, half a century ago, was the farm and residence of the late Col. Bond. All the varieties of vegetable cultivation, shrubs, trees, fruits and flowers, of all the various climates, may here be found. Tropical trees and fruits, oranges and lemons, figs and dates, pine apples, the coffee and tea plant, the cinnamon and the alspice — indeed, many more than we know how to name, much less to describe—may be found here. The establishment of this garden alone must be kept up at an annual cost, appalling to the purse of the most wealthy men of the country; thrown upon the hands of the man with an income of ten thousand a year, the cost of such an establishment as the garden, would make him shrink from the idea of fixing it among the permanent amusements of his life.

The farm of Mr. C., including the walks and lawns and splendid woodlands, together with the garden, covers about sixty acres: the whole is in a high state of cultivation. The quantity of hay upon the acre is immense. Fifteen hands were employed at hay making on the day of our visit; ten hands is the minimum number employed at all seasons upon the farm; and five men, the most if not all of them trained European gardeners, are kept constantly employed in the garden. Such of these as have families, find their domicil in a brick house of many apartments, forming the rear part of the wall which surrounds the garden. The garden consists of two or more acres, and in its centre is a splendid fountain and vase, from which we presume the whole may be watered at all times. The sides of the close brick walls

upon either hand, as well as the latticed fences on the margins of the various walls, were decorated with fruit trees, apricots, peaches, pears, &c., which had been taught to grow in the shape of an open fan, with the branches extended in those directions which would compel all the limbs to stand as the side of a panel, and thus enable the light and the sun to strike both the tree and its fruit directly upon the side of the wall. Although this position of the tree did not leave them to the freedom of nature, yet the gardeners informed us that these bore better and more fruit than when left in a natural position. Clusters of ripe grapes were hanging in this garden on the 12th of July; these were forced by means of artificial heat; but there were many early fruits, such as peaches and pears, that were nearly ripe.

Mr. C. is erecting, near the front of the garden, a brick dwelling-house, which will vie in expense and interior and exterior elegance and convenience, with any other house probably in the country. This house has already been three years in building and preparation; the work exhibits a perfection in material and arrangement greater than any structure we have ever before seen; it is supposed one, if not two years more, will be necessary to complete it.

Everything is done on Mr. Cushing's farm to gratify the taste—nothing is done with a view to making money. Mr. C. will consume everything raised upon his farm if he can. To make manure, he keeps some hundred and fifty hogs: finding no other practical use for the meat of these, his overseer was obliged, as we are informed, to send to the Boston market some eighteen or twenty fat hogs last fall. Mr. C. introduced from Europe the finest breed of cattle, and, with his characteristic benevolence, presents and places some of the best in positions most likely to propagate them. In his garden the workmen were employed in throwing from an engine a liquid preparation calculated to destroy the insects which were upon them, engaged in the work of destruction.

To do the farming and gardening justice, we ought to have spent a week in viewing the processes by which giant vegetation was procured, and the kind of treatment which every variety of thing coming from earth required. Our stop was short; we went into several of the unfinished apartments of his splendid house, and had a full view of the Boston State House and city from the balustrade in front; and we left the enchanting scene with regret. The intelligent neighbourhood of farmers around him will profit by the introduction of useful breeds of animals, and by every valuable experiment which he makes, at the same time, few of them will envy his superior ability to farm and garden on an astonishing scale; and none of them will ever undertake to be his competitors in producing the rarities and curiosities of nature merely to gratify taste, and with no view to replenish the purse."

Recipes for Composts.

A Substitute for Soapboilers' Spent Ley.—Take of—

" Fine, dry, snuffy peat	50 lbs.
Salt	½ bushel.
Ashes	1 "
Water	100 gallons.

Mix the ashes and peat well together, sprinkling with water to moisten a little: let the heap lay for a week. Dissolve the salt in the water, in a hogshead, and add to the brine the mixture of peat and ashes, stirring well the while. Let it be stirred occasionally for a week, and it will be fit for use. Apply it as spent ley, grounds and all. Both ashes and salt may be doubled and trebled, with advantage, if convenient. The mixture or ley must be used before it begins to putrefy: this occurs in three or four weeks. It then evolves sulphuretted hydrogen gas, or the smell of gas of rotten eggs: this arises from the decomposition of the sulphates in the water and ashes, by the vegetable matter. A portion of the geine is thus deposited from the solution.

Salt, Lime and Peat—Take one bushel of salt—one cask of lime. Slack the lime with the brine made by dissolving the salt in water sufficient to make a stiff paste with the lime, which will be not quite sufficient to dissolve all the salt. Mix all the materials then well together, and let them remain together in a heap for 10 days, and then be well mixed with 3 cords of peat; shovel well over for about 6 weeks, and it will be fit for use. Here, then, are produced 3 cords of manure, for about the cost of $2 10 per cord.

Salt	$0.60
Lime	1.20
Peat	4.50
	3)$6.30($2.10

From experiments made in a small way, it is believed that this will be found an effectual manure: the author suggests it, in the hope that it may lead to cautious experiment."—*Dana.*

A QUART of corn soaked in strong salt-petre liquor, and sown upon the surface of an acre of land at the time when the corn is coming out of the ground, or at the time the crows commence pulling it up, will serve as a sure protection against their interfering at all with the corn. I have practised it for 15 years, without ever knowing a hill of corn being touched by them after this.—*O. M. Whipple.*

For the Farmers' Cabinet.

The Carrot Culture.

Mr. Editor,—I find in the last number of the Quarterly Journal of Agriculture, some very valuable remarks on the culture of the carrot, by Mr. James Brown, which are well deserving the notice of the cultivators of that root in this country. It has been sometimes objected, that the expense and labour attending a large crop of carrots are more than can be afforded, where the rate of farm-wages is so high; but the uniform testimony of all those who have persevered to the end, is in favour of clean, unremitted culture; while it is those only who have fainted in a race against the weeds, who have been satisfied that "the thing will not do here." It is readily granted that the trouble is great, but those who have gone through it, assure us, that after that point, to which all proceed—a sort of half-culture—when the weeds have made their last growth, and one more clearing will have broken the neck, as it is termed, of the labour, the trouble is comparatively slight, and the satisfaction great; while the value of the crop is generally much greater than almost any other that can be grown—(witness the account published by Mr. Gowen in the Cabinet, page 190 of the 5th volume)—and always commanding a ready sale. In the culture of the carrot, the use of the subsoil plough will no doubt be found of infinite importance.

Mr. Brown says: "It is well known that the carrot is very apt to be injured, and often entirely destroyed while young, by small worms eating the roots, particularly when grown in a soil having long been under cultivation, as gardens generally are, and full of manure. As my principal intention is, to give a system of culture by which the carrot may be grown quite free from this injury, I will give a course by which, according to my own experience, this might be effected. At Mount Melville, where I served my term of apprenticeship to gardening, the garden was quite new, and had lately been levelled, trenched and drained; that part devoted to the culture of the carrot having been removed to the depth of two feet; here the crop attained a perfection which none of those raised in the old neighbouring gardens ever reached; and on mentioning the circumstances to the gardener, he remarked—"All the surrounding gardens have long been under cultivation; and I am satisfied that ground that has been saturated with manure, is not in a proper state for the perfect growth of the carrot. Now, our garden has been under pasture for fifty years, during which time those gardens have been under a constant course of cropping, which has unavoidably required the continual application of large quantities of manure to renovate and stimulate the soil; thus the land has become foul or sick; for along with the dung used in garden cropping, insects in every stage of their being, and particularly in their egg state, enter, and consequently are dug into the soil; and when these are brought to life, they attack the young roots of plants which grow in the soil, particularly the carrot, as it is of a sweet, fleshy and soft nature, without an outer skin sufficiently hard to repel their attacks. Our garden has not yet undergone those repeated manurings, and is therefore clean ground, or more properly, it is not yet adulterated with foreign particles not natural to the soil, and that, I consider, is the reason why our carrots are better than our neighbours'." I was struck with the rationality of the theory, and was determined to put it to the test of experience the first opportunity, which soon offered, by my taking the care of the gardens of Henry Dunlop, Esq., of Craighton. Here, I inquired if they had good crops of carrots in the garden? and was informed they were uniformly bad—the garden being an old one afforded me an opportunity, which I embraced by preparing the land according to the method I had in view. But before I enter into detail I would say, I had always observed that the vermin which attacked the carrot were, for the most part, near the surface of the ground; and upon examination, I ascertained that very few of the living insects were to be found deeper than eight inches below it; I therefore concluded, that the eggs of the insects required the influence of both air and sun to bring them into life, although there is no doubt they lie dormant at a greater depth perhaps for years, requiring only to be brought within the influence of the sun and air to insure their vitality. I therefore concluded, that the *common* mode of trenching the soil for carrots was useless, because the insects, although buried in the act of trenching, had still the power of bringing themselves to the surface, as nothing but the open soil was above them. Now, the end I had in view was, to trench the ground so as that the upper stratum should be so buried in the bottom of the trench as to have *no connection* with the newer portion of the soil placed above it, and thus I effected it.

The soil was rather stiff; my first operation therefore, was to drain it, after which I commenced trenching in the following manner. I took out an opening along one end of the piece, wheeling the earth to the opposite end for the purpose of finishing, the opening being three feet wide and two feet deep; I then marked off another trench of the same breadth with the first, and parallel to it, and dug up the top spit of the second trench and cast it into the bottom of the first opening,

and at the same time shovelled clean up the loose earth left behind the spade, and threw that on it. This I levelled in the bottom of the trench, and trod hard with my feet, making it firm and compact; and thus I had the whole body of the soil in which were the living insects with their eggs, &c., firmly fixed in the bottom of the trench, and not likely again to be disturbed by after work on the surface. On this layer of earth, trodden as firm as a barn floor, I wheeled in a compound previously prepared, consisting of two-thirds lime and one of sand, one inch thick, and upon this I turned over the remainder of the trench to the depth of two feet; and in the same manner, went over the whole piece, always putting in the compost above the trodden earth in the bottom of the trench; and finishing by scattering over the surface about three-quarters of an inch in thickness of the above compost, and digging it lightly in, thus to lie exposed to the frost of the winter, repeatedly digging and presenting a new surface to the weather when opportunity served. In the month of April, I slightly dug the surface, and drew the drills 18 inches apart and an inch deep, sowing the seed of the Altringham variety of the carrot pretty thick, and finishing by a slight rolling. When the plants were three inches in height, I thinned them to four inches apart in the rows, choosing a damp day for the purpose—a necessary precaution, as I have known whole crops destroyed by thinning in dry, hot weather; the ground being left open about their slender roots, the heat dried them up and caused their death in a very short time: if this work can be performed during a gentle rain, so much the better. The crop of carrots grew rapidly after this operation, and at the end of October, presented an appearance not equalled in that part of the country; no mark of worm or rust upon them: they were acknowledged to be the best that had ever been grown in the same garden during my employer's lifetime.

C. W.

Absorbent Effects of Lime.

Lime possesses other properties besides that of neutralizing acids; one of the most remarkable being its power to absorb putrescent manures, and to hold the fertilizing essence until it is wanted by the crop through every vicissitude of the seasons, and through indefinite periods of time—there it is, locked up, and nothing at common temperatures but the energy of a growing plant can unlock it. Lime is styled the basis of all good husbandry; it stores up the manure that is not immediately wanted for future use, and thus becomes a kind of *save-all*. When the supplies from the barn-yard are spread and ploughed into a soil that is nearly destitute of lime, the growing crop catches only a part of its virtue, a large portion escaping, and but little will be left for the benefit of succeeding crops. Lime fixes the volatile substance, and parts with it gradually, and in the proportion as well as at the time it is most needed. Unwholesome and villanous smells are absorbed by lime; and some places, and even extensive districts of country, once remarkable for insalubrity, have been changed in their character by liming around them, and thus nuisances are converted into manures. A striking illustration of this principle is thus recorded in Ruffin's invaluable essay on calcareous manures. The carcase of a cow was laid on the ground and covered with 25 bushels of broken shells mixed with 45 bushels of earth; the process of putrefaction was slow, and several weeks passed before it was over; nor was it ever so violent as to throw off any effluvia that the earth, rendered calcareous by the shells, did not intercept in its escape, so that no offensive smell was ever perceived to arise from the decomposing mass, which, in a few months was turned over and carried abroad, furnishing a dressing sufficient for the sixth part of an acre of wheat, the effects produced far exceeding that of other calcareous manure applied at the same time on the surrounding land. But the farmer must not suppose that calcareous earth enriches a soil by *direct* means; it destroys the worst foe to productiveness, *acidity*, and uses to the greatest advantage the fertilizing powers of other manures—being the strong box for the treasure, rather than the treasure itself.—*Thomas's Address.*

Protection of Corn against Crows.

The best *scare-crows* we have ever used, were bright sheets of *tin* suspended from poles by wires—the poles of sufficient height, and in sufficient numbers to be seen all over the field. Four or six, if judiciously placed, will effectually answer for a field of 50 acres. Our mode of fixing them was this: we cut a pole of sufficient height; trimmed off all the limbs but the upper one; to the end of this limb we attached, by a strong flexible wire, a sheet of tin, and planted the pole thus provided, firmly in the ground, on the destined spot. The limb left at the top, should project horizontally far enough to allow full play to the tin. Thus attached, the slightest breeze gives motion to the tin, and consequently causes a reflection so sudden as to effectually frighten off crows, or other birds addicted to picking up the corn. Three years' successful use of such scare-crows, justify us in recommending them to our brethren.—*American Farmer.*

For the Farmers' Cabinet.

Removal of Weeds from the Soil.

Mr. Editor,—In the Farmers' Register for April, I find some well-written remarks by the Rev. J. H. Turner, in reply to inquiries and strictures addressed to him by an anonymous writer over the signature of "A Young Farmer," one of which has surprised me not a little. That such a question should be asked by any *but* a farmer, would be sufficient to call forth a degree of astonishment—that such a question *has* been asked, even by a *young* farmer, adds greatly to that feeling; but that such a question could be permitted to have weight sufficient to call forth such an *answer*, from such a man as Mr. Turner, is the most surprising thing of all! The question asked is—"Is not the practice of removing the weeds injurious to the land from which they are taken?" and the answer, no less remarkable and strange, is—"This is very generally considered to be the fact"! And although the writer adds, "but after looking at the subject in all its bearings, I am decidedly of a different opinion," he goes on to say, "I do not pretend that the removal of a weed or anything else from the land, can benefit the spot on which it grew." Indeed!—then I have been taught in a strange school, for I have been made to believe that no good husbandman will ever permit anything to grow on his land, save what he plants in it; and that a strong weed growing in a crop of drilled wheat has been known to draw away a great portion of the nourishment from six of the adjoining plants; thus rendering the produce inferior, both in quality and quantity; while Mr. Coke—Lord Leicester—after eighty years of the most successful farming, must indeed be very ignorant, when he conceives that his success depends entirely upon his careful cultivation and the eradication of weeds; and how great must be that ignorance, when we find him, at his grand annual sheep-shearing feast, offering a reward to any one who shall find a weed growing on a thousand acres! his turnip crop consisting of 700 acres annually.

Mr. Turner, in advocating the mowing of weeds after harvest for the purpose of furnishing litter for the manufacture of manure, seems to have only this one end in view, for he says, "But what do we accomplish by it (the mowing of the weeds)? We produce a convenient material by which we can keep our stables and hog-pens clean and healthy; making the richest and best manure; then, it cleanses the field; and at the next harvest, instead of battering the scythes against hard, dry weeds, there is a beautiful clean surface to cut over; labour therefore is saved, and the crop secured is cleaner and in better condition." But not a word does he say as to the exhausting character of these weeds, by which the land must have been drained of *half* its powers of nutrition—that being the proportion of the weeds to the crop of grain, &c., sown, when the owner does not consider that their presence is exhausting! Shades of Jethro Tull, and the thousand other successful cultivators of the soil, who have been labouring for so many years to convince us both by precept and example that the eradication of weeds is necessary to the well-being of the crop that is cultivated, even at the severest cost of labour and expense, how would you be surprised and astonished to find that there is a spot on the globe—in Virginia—where one of the most prominent of her cultivators cannot pretend to say that the removal of a weed or anything else from the land, can benefit the spot on which it grew! Ye who have contended that the most sterile soil could be rendered rich merely by pulverization, if no plants were to be permitted to grow upon it; and that weeds are more uniformly exhausting, than any artificial crop that can be planted, particularly when they begin to perfect their seeds, as they all do at the time of harvest! But, certainly the advocate of the non-exhausting character of weeds has hit upon a very easy mode of farming, which might be expedient for that section of country from which he hails; it is, however, with feelings of pride and thankfulness that I add, such a course of cultivation "would not do in these parts," where men are content to earn their bread by the sweat of their brows, and where an enclosure overgrown with weeds is considered a disgrace to its possessor; no one ever dreaming of asking the question, "Is not the practice of removing the weeds injurious to the land from which they are taken," any more than that the answer would be given, "I do not pretend, that the removal of a weed or *anything else* from the land, can benefit the spot from which they are taken"—a crude answer, it must be admitted, which if it do not bear the meaning I have attached to it, must mean nothing.

This is the first time that I have ever heard the growing of weeds advocated; I thought the most that could be said for them was, "What shall I do with my stock after harvest, if I mow the weeds in my grain stubbles?"—a question which was once asked, to which the reply given was, "grow useful green crops, that will not shed their pernicious seeds on the land to give you the labour of seven years' weeding." But we live in eventful days, which incline us to fear that the world is no *wiser* than it was centuries ago—the definition of wisdom being, "the right application of knowledge." W.

Eastern New York, May 21, 1842.

For the Farmers' Cabinet.

Compost Making.

Mr. Editor,—At length it would appear that the making of compost is beginning to command attention; I see several experiments going forward around me, but what is more to the purpose, I have one in progress which I attend and watch with very great interest—it is, the mixing bank earth with lime, hot from the kiln, the earth being the opening of a deep cut through a marshy hollow, where it had lain for the past age and become covered with grass and weeds and tufts of herbage, &c., all which I turned down with the plough after covering them with a coat of lime, using the subsoil plough at the same time; and upon this, I have again thrown earth and lime in alternate layers, as directed at page 316 of the last number of the Cabinet, expecting to reap a rich harvest in return for my labour. And I now begin to perceive how the making of compost operates; it is, by the absorption of the gases, liberated by fermentation, which always takes place on bringing two substances into contact, be they never so dissimilar in their nature and properties, particularly when they are composed of *putrid matter*, whether animal or vegetable, that, being acidulous, is immediately neutralized by the alkali of the lime, and the gases friendly to vegetation, liberated by the process, are immediately absorbed by the earth in composition, in which state it is carried abroad on the land to be operated upon by the rain and dews, which carry the carbonic acid to the roots of the plants by its power of density. And I perceive that the bank of earth in question sends forth a smell, as has elsewhere been observed, somewhat like soap-boilers' ashes.

The absorbing quality of fresh-turned earth calls to notice a very wise ordination of nature; for were it not for this arrangement, the abodes in the vicinity of cemeteries would not be habitable to human beings; the exhalations arising from the decomposing bodies by which they are so thickly tenanted, would so contaminate the air as to breed a pestilence: a very slight covering of earth, however, is found all-sufficient for the purpose of absorbing all the malaria that is engendered, and teaches us at the same time the mode in which these putrid gases may be preserved to give life to a future generation—according to the "Gem" from Liebig—see page 336 of the 5th vol. of the Cabinet. In confirmation of this view of the subject, it is stated, that a garment which has been contaminated by the filth of a skunk, may be rendered perfectly inodorous in a short time, merely by burying it in fresh earth, so that the parts defiled come in immediate contact with it.

Here then is the *rationale* of the whole matter—the earth in our compost heaps absorbs the gases that arise on fermentation, fixing these that are friendly to vegetation, and permitting those of a contrary nature to pass off into the atmosphere, there to form other combinations, by which they might be prepared for other purposes! After this, may it not be expected that we shall carry our dung from the barn-yard during winter and deposit it in the fields where it will be required the next spring or autumn, turning it up and mixing it with muck or bank earth, in the proportion of one of the former to three or four of the latter, and thus add to our resources without the purchase in town of a commodity that we can better supply at home; remembering, the oftener it is turned, the more it is enriched by atmospherical and other influences, and rendered at last a bank of gold! I guess it might. P.

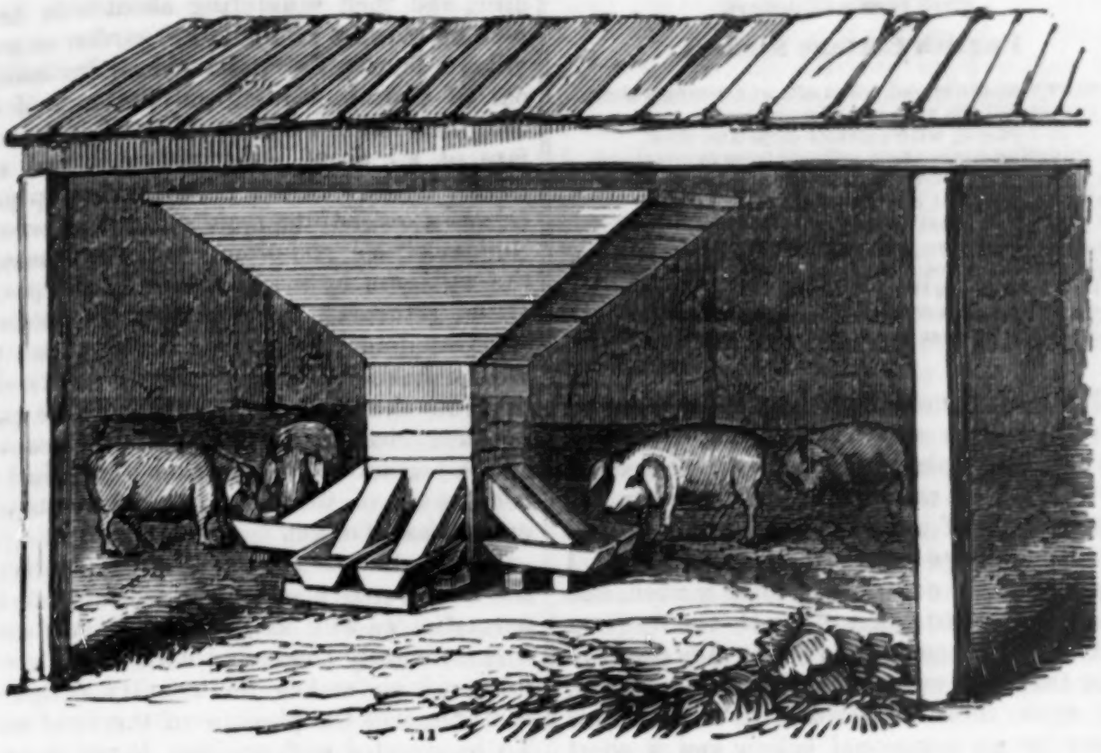
May 24, 1842.

Plaster.

Plaster is a cheap and easily transported manure, and is applied with little trouble or cost. In many cases its good effects are very apparent, although on some soils it has but little effect; yet it is well for every one to try it and make experiments for himself. Sometimes the increase of crop from its use has paid four or five times the cost, and old pastures have been improved by it, so as to support twice the stock it had been accustomed to do; while in other cases it has had no perceptible effect; it would be well, therefore, to make the experiment cautiously until it is ascertained what are its real effects.

In the British American Cultivator, a farmer states, that on 12 acres of land that usually produced six tons of hay, by sowing four barrels of plaster in May, 1837, he cut from it the same season 15 tons. He had applied plaster every year since with great success, except the last, which was unfavourable to grass on all soils, in consequence of the drought. But he finds that plaster applied in the spring to any kind of *grain*, although it causes a good and quick growth, adds nothing to the crop at harvest, nor does it ripen so well and uniformly. He applies plaster to grass about the first of May, and considers a barrel sufficient for three acres of land.—*Far. Jour.*

Cabbage Culture.—"Sixteen acres of cabbages planted on the farm of L. Wyckoff, in Bushwick, Kings county, produced 61,120 heads, which sold for $2,434 77. The sod was turned over in the fall of the year and well worked in the spring, fifty cart loads of street manure being allowed per acre."



THE FATTENING HOG-STY.

The above representation of a hog-sty is taken from an old folio work on agriculture and husbandry; it exhibits a mode of feeding hogs which ought never to have fallen into disuse. The only way in which it can be adopted is in feeding whole corn or grain, or that which has been coarsely broken and kept dry; but as many persons are still in the habit of feeding whole grain in the most wasteful, loose, and inconvenient manner, the mode here pointed out will no doubt very much interest them. It embraces many excellent purposes, and should immediately be adopted on every farm where the feeding of whole or dry food is practised; it is simple, cheap, convenient, and applicable to all situations.

In the first place, it takes little room in the erection; is under shelter; each hog has a trough to himself, in which he cannot place his feet while feeding, nor disturb his fellow; the corn or grain is delivered into the trough no faster than the hog eats it; it is never full to overflowing, or empty, while any grain remains in the hopper; the grain is kept dry, clean and sweet, not being soiled by the feet of the animals or the moisture from their mouths; and the feeder can apportion a given quantity of food to the hogs at the time of filling the hopper, by which he may ascertain, when that is emptied, how much per hog has been expended, keeping the account by scoring the date when, and the number of bushels placed therein, on the side of the hopper by means of a piece of chalk, with the satisfaction of knowing that each hog has had as much food as he chose, and that it has been administered at the time most suitable to his wants, and that no more has been fed than was required; no dependence being needed to be placed on careless or interested servants, as likely to *over* as *under* feed; the weakest hogs as certain of obtaining their fill as the strongest, it being only necessary for them to fall back while the stronger are feeding, their time coming after, and their share being as secure, sweet and plentiful, as that of any of them. A strong and tight cover to the hopper with a lock to it, saves the corn that way from depredators, whether rats, mice, fowls or men; and at the time of slaughtering, the feeder is able to ascertain the number of bushels of grain that have been expended in the process of feeding; and by placing the value against the weight of pork, he will see at a glance the cost per pound for fattening; and this, without labour, loss or care, with a saving of much inconvenience and cost. The troughs for water should be placed outside the building, in the yard appropriated for exercise and the making manure; thus the feeding-place, which is also the bed-place, will be kept dry and clean, a consideration of great importance, for it is an egregious error to suppose that fattening hogs delight to wallow in their own filth; generally speaking, there is no cleaner animal than a fattening hog, or one that delights more in a comfortable, dry habitation.

From Jesse's Gleanings.

English Cottage Scenery.

"Sweet was the sound when oft, at evening's close,
Up yonder hill the village-murmur rose;
There as I pass'd, with careless steps and slow,
The mingling notes came soften'd from below;
The swain, responsive as the milk maid sung,
The sober herd that low'd to meet their young,
The noisy geese that gabbled o'er the pool,
The playful children just let loose from school,
The watch-dog's noise, that bay'd the whispering wind,
And the loud laugh that spoke the vacant mind —
These, all in sweet confusion sought the shade,
And fill'd each pause the nightingale had made."
Goldsmith.

There is something unspeakably pleasing in rural sounds and rural objects; the noise of village boys playing at their various games, the cawing of rooks in a still evening, the distant tread of a horse, the sheep bells, and even the village clock, are all pleasant! I like to see the cows going to be milked, and inhale with satisfaction the fresh and fragrant perfume which one perceives as they pass by: those that have calves are always in advance, and show their impatience to reach their young by an occasional bellow and a short run, and then a sudden stop to listen whether they can hear the call of their calves; if they do, how eagerly do they advance to the gate of the farm-yard and show the utmost anxiety to have admittance! The clean, well-scoured milk-pails and churns are delightful objects; and while the process of milking is going forward in a well-littered farm-yard, the cows quietly chew the cud, and appear contented and happy. Those, however, which have been recently deprived of their young ones, show a reluctance to give down their milk, and many retain it, from a maternal feeling that their offspring may require it.

On a fine summer's day, we hear the tinkling of pans and shovels, to persuade a swarm of bees to settle in some cottage-garden, and are pleased with the whetting of the scythe in a neighbouring meadow; while the gobbling of the turkey, the peevish call of the guinea-fowl, and the cry of young pigs for their evening meal, are pleasing sounds to those who delight in the country. I love also, the village church — the peasant enters in his clean frock, smooths down his hair, says, or appears to say, a word in his hat, which he then carefully and deliberately hangs up, and then leans with crossed arms over the door of the pew until the service begins; and both before and after church, he may be seen standing with his back against the low wall of the church-yard, with the hand of a favourite child or grandchild in his, talking over the village news; and as the squire or clergyman pass, he touches his hat to them with respect and affection; and in the evening he may be seen with his cottage-door open, drinking tea with his wife and children, and then sauntering about with them, picking flowers either in his garden or some village lane. The good old squire hobbles out of church, leaning on the arm of his daughter, and kindly inquiring after the welfare of all about him; he sends food and money to the sick and needy, makes up quarrels as a magistrate, maintains a well-ordered Sunday-school, and promotes the happiness of the villagers by every means in his power. If, on returning from church, he meets a smoking dinner going to a cottage, from the village bake-house, he generally slips a shilling into the hand of the bearer, as his quota in some charitable fund; I must, however, add, he sometimes slyly takes a good-looking potatoe out of the dish, which he eats with evident satisfaction.

The welfare of the labouring population of the country, is a subject which interests the naturalist as well as every other good man; it is intimately connected with almost everything which makes the country delightful, and enhances the pleasure of the rural walk. To be greeted with smiling, happy faces, to see the insides of cottages clean and orderly, the outside decorated with flowers and well-cultivated and flourishing gardens, never fails to produce sensations of pleasure and satisfaction: and if, in addition, a fat pig is found in the sty, it is a proof that the family is thriving, and that the head of it is an industrious, sober man. Happily, such cottages may still be seen in every village in England, affording to the neighbourhood an useful and instructive example of the benefits to be derived from good order, industry and sobriety. But it must be confessed that the reverse of all this is too often witnessed, although I have seldom found an instance of a sober, industrious, steady man, who could not get work, fairly paid for: but haunts of vice and facilities for drunkenness have been multiplied to a frightful degree, and those, whose examples should check the vice and improve the moral condition of the lower classes, are too often poisoning the sources from which their own wealth and power are derived. In a certain village, where attention has been paid to the morals and well-being of the population, the most beneficial results may be seen; the beer-shops are less frequented, and of course the poor's-rate is low; the services of the sabbath are well attended, and the labouring class have little to complain of; everything appears comfortable and flourishing; poverty has been excluded, every one looks happy and contented, and the whole village is a picture of neatness and prosperity; the church is kept in repair, and has been enlarged, school-rooms have been built, and various improvements made in the village, all by voluntary subscriptions; some of them by persons residing out

of the parish, who were desirous of aiding the exertions of an individual, who has been at the head of this creation of happiness; while an adjoining parish offers an example of the effects of a contrary system of management—here the tradesmen meet on parish business at the ale-house in the evening, many of them generally half drunk; they are headed by an attorney, who has involved the parish in lawsuits, and driven every respectable person from the vestry meetings. Here the poor-rates are enormous, the church-rates high in proportion, and the parish is overwhelmed with debts and unemployed poor! These parishes are cited as proofs of good and bad management; in the former, one active, intelligent individual, co-operating with a few respectable farmers and tradesmen, has been the means of effecting all the good I have enumerated: in the latter case, interested storekeepers have generally had the disposal of the parish funds; the poor have been neglected, and the whole place has become a picture of poverty and wretchedness! It is not possible to imagine two villages which afford a more striking contrast, and yet, they adjoin each other.

For the Farmers' Cabinet.

Pressure of the Atmosphere.

Having to transact business some miles from home, and the starting of the cars not suiting my convenience, I determined to walk the distance on the railroad, which offered a very smooth path, by which I expected to reach my destination without inconvenience and fatigue, by taking it leisurely. But I was very much surprised to find that I had not proceeded three miles on the road before I felt my feet very tender and beginning to blister: this I could not account for, as the road was as smooth as a floor and quite level; and I began to fear that I must relinquish my intention and wait for the cars, perhaps a couple of hours; when, all at once, I thought of the Dialogue between Frank and his Father on the subject of the pressure of the atmosphere, which I had read only the day before, at p. 114 of the 4th vol. of the Cabinet, where it is said, when accounting for the splashing of the mud in the streets of London, "the pavement is worn so smooth, that at every step the shoe fits it so closely that the air is driven forcibly out from under it; and then the foot falls so *heavily*, in consequence of the pressure of the atmosphere upon it, that the mud is scattered about on all sides;" and when walking in clay, "the foot takes so close an impression, and is pinned so forcibly down by the pressure of the atmosphere, that it is often difficult to raise it." Then I thought I could perceive the cause of the pain of my feet; the truth of the conjecture I put to the test of experience at the moment, by changing my road, and walking on a part of the path which was more unequal; and in about a dozen steps I was convinced of the fact, for I walked more easily, lighter, and without pain; the inequalities of the ground giving space for the expansion of air under the foot, by which the pressure upon it was at once removed; and with it, the pain also. After I had made the discovery, it was a source of amusement to witness how suddenly the pressure would become painful on the smooth road, and be as quickly relieved by changing it for that of greater inequalities. The result was, I finished the task I had set myself, and reached my destination with far less fatigue than I had ever experienced in the many perambulations which I am called upon to perform in the way of business; and in this single instance, I am indebted to the Farmers' Cabinet for the value of far more than my six years' subscription money, trifling as it may at first appear. D. C.

May 25, 1842.

Precious Metals.

Gold, the most precious of the metals, seems to have been known from the earliest antiquity. It is of an orange red, or reddish yellow colour, and has no perceivable taste or smell. Its lustre is considerable, yielding only to platinum, steel, silver and mercury. It is rather softer than silver—its specific gravity is 16.6. No other substance is equal to it in ductility and malleability. It may be beaten out into leaves so thin that one grain will cover 56¾ square inches. These are only one 282,003 of an inch thick. But the gold leaf with which silver wire is covered, has only 1-12th of that thickness. An ounce of gold upon silver is capable of being extended more than 1,300 miles in length. Its tenacity is considerable, though in this respect it yields to iron, copper, platinum and silver.

From the experiments of Seckingen, it appears that a gold wire, 6,078 of an inch in diameter, is capable of supporting a weight of 150,07 lbs. avoirdupois without breaking. It melts at 32 degrees of Wedgwood's pyrometer. When melted, it assumes a bright bluish-green colour. It expands in the act of fusion, and consequently contracts while becoming solid more than most metals; a circumstance which renders it less proper for casting into moulds.

The "sons of thunder" make most noise in the world, but the "sons of consolation" lay mankind under the most lasting obligations, and plant their principles deep in human nature.

For the Farmers' Cabinet.

Cultivation of Corn.

Mr. Editor,—The Louisville Journal publishes a letter over the signature of Walter C. Young, that seems at length to contain something new relating to that hackneyed subject, the cultivation of corn. In this region of country, to talk of ploughing the land in the fall of the year, and again in the spring as deep as circumstances will admit, sounds rather heterodox; but it strikes me there is something in it, although whenever I have proposed it to my agricultural friends, they have given me to understand that I was no *farmer*. Now, that is true enough, but if my prayers are heard, I shall some day be one in this country, as I was in the old one, and then I will not thank any for their opinion, as I mean to have one of my own, and of my own framing too, from experiment. I have often wondered what would be the result of a thorough fall and winter working of land for corn, so that it should be clean and pulverized; and although I have been told the corn would not grow, or if it did, that it would never stand to ripen, but fall down for want of support at the root, I have not hesitated to express my belief to the contrary. And here at length, is the testimony of a man who, in the estimation of the Editor, comes nearer to perfection than any one else that he knows in the culture of corn, having produced 195 bushels (ears, I presume) of corn to the acre, and in the dryest seasons, not less than 100 bushels; growing larger crops than any one else; his mode of management admitting the cultivation of a large number of acres to the hand. But I beg leave to extract some observations from Mr. Young's letter, for publication in the Cabinet. He says:

"My universal rule is, to plough my corn-land the fall preceding the spring when I plant; and as early in the spring as possible, I cross-plough as deep as circumstances will permit, and as soon as this is done, I commence checking off the first way with my large ploughs and the second with my small ones, the checks, three feet by three, admitting of working the land both ways. And then, I plant my corn from the 20th to the 25th of March—a rule to which I adhere with scrupulous exactness; planting from eight to twelve grains in each hill, covering the same *from four to six inches deep*, greatly preferring the latter depth; and in this particular I take more pride and more pains than any other farmer in Kentucky, holding it as my ruling principle, that the product of the corn-crop depends very much upon its being properly covered, and much on its being properly ploughed the first time. So soon as my corn is up of sufficient height, I start the large harrow directly over the rows, allowing a horse to walk each side, harrowing the way the corn was planted; and on land prepared as above and harrowed as directed, the hoeing part will be so completely performed by this process, that it will satisfy the most skeptical. Then, allowing the corn thus harrowed to remain a few days, I start my small ploughs with the bar next the corn; and so nicely will this be done, that when a row is thus ploughed, so completely will the intermediate spaces, hills, &c., be lapped in by the loose earth occasioned by this system of close ploughing, as to render any other work useless for a time. I thin to four stalks upon a hill, never having to transplant, the second ploughing being performed with the mould-board towards the rows of corn; and so rapid has been the growth of the corn between the first and second ploughings, that this is performed with ease; and when in this stage, I consider my crop safe; my general rule being, never to plough my corn more than four times, and harrow once. My practice is, to put a field in corn two successive years, then grass it, and let lie eight years, a rule from which I never deviate. Now, I do not pretend that the labour bestowed upon a sod-field to put it in a state of thorough cultivation does not meet with a fair equivalent from one crop, but I presume no farmer will doubt when I say, the second year's crop from sod-land is better than the first, with not more than one half the labour. The best system of farming is, to produce the greatest amount of profit from the smallest amount of labour.

"I lay it down as an axiom incontrovertible in the cultivation of corn, that whenever a large crop has been raised, it was the result of close and early planting; and I defy proof to the contrary. I plant my corn three feet by three, four stalks in a hill, and allow but one ear to a stalk, and one hundred ears to a bushel, and then ascertain how many hills there are in a shock, sixteen hills square, which is the usual custom to put it up. My present crop, planted on the 20th of March, bids fair to outstrip any preceding one; I am now ploughing and thinning the first planting.

Walter C. Jones.

"Jessamine Co., Ky., April 26, 1842."

It is novel, indeed, to plant on the 20th of March to the depth of six inches; but without this deep planting, it would be ruinous to the crop to harrow with the two-horse drag the way the corn was planted; and it is a very interesting question, whether by means of early and deep planting, the ravages of the cut-worm might not be arrested, as also, whether they would not be entirely destroyed by a careful autumnal ploughing and a cross-ploughing in the spring "as deep as circum-

stances would permit," with three other ploughings during its early growth. The very act of deep planting might possibly operate very effectually against the attacks of the cut-worm by placing the grain out of its reach. At all events, the thing is well worthy a careful trial, and the serious consideration and examination of every one, especially of those within a distance which affords the proof of ocular demonstration. I trust we shall hear more on this very interesting subject; Mr. Young's rotation of crops is as singular as his mode of planting, and might prove to be worthy the imitation of corn-planters and cattle-breeders in this section of country also.

T. F.

Philadelphia Co., May 28, 1842.

Fall Ploughing.

The Monthly Genesee Farmer, vol. 1, page 180, in an article on this subject, says:

1st. It is one of the established principles of philosophical agriculture, that the soil derives much of its productive property from the air, and that chemical changes and combinations are constantly going on, by which fertility is much increased. These alterative effects of the atmosphere, and these changes of the qualities of the soil, are the more active and efficient as new surfaces are exposed to new action. For instance, much greater quantities of carbonic gas will be absorbed by a given surface of earth, if the earth is frequently stirred, than if it was allowed to remain with a single saturated surface. Ploughing, by exposing new surfaces to the action of the atmosphere, must be productive of essential benefit; and as fall ploughing generally takes place after crops which have partially exhausted the surface of some of its nutritive and absorbent qualities, its service in aid of spring crops is greatly enhanced.

2. There is always on land more or less grass, weeds, stubble, or other vegetable matters convertible into mould by fermentation and decomposition, a process which is greatly aided by being turned under the surface of the earth. Fall ploughing renders such substances much sooner available in advancing the growth of crops, than they would be if left uncovered during the winter, independent of the great loss necessarily sustained by the washing away of the lighter materials and their dispersion by the winds.

3d. Nothing acts more efficiently on moist soils in promoting vegetation, than high pulverization; and fall ploughing aids this operation most essentially. Lands that if ploughed in the spring only, will remain in large cakes or lumps, defying the efforts of the farmer to reduce them suitably, will, if ploughed in the fall, be found loosened in texture and fitted for early operations in the spring of the year. Frost is the most efficient disintegrator of the soil with which the agriculturist is acquainted, and he should avail himself of its available labours in all practicable cases.

4th. The earlier the ground can be prepared for the suitable reception of spring crops, such as corn, spring wheat and barley, the better it will be found for the cultivator; and in nine cases out of ten, early sown crops are the heaviest and most productive.

5th. Ploughing land acts more effectually in destroying insects than any other mode of treatment, and fall ploughing for this purpose is preferable to any other. Those insects which produce the most mischief to the farmer, such as the fly, cut-worm, grub, &c., cannot resist the frost of our winters, if prematurely exposed to its action by a fall ploughing. The cut-worm which accumulates in such numbers in old meadows and pastures, is thus destroyed, and crops planted on them saved.

Lastly. Our summers are so limited in duration, that unless the time allotted to vegetation is fully occupied by the growth and ripening of plants, the certain failure of crops may be anticipated. Hence the farmer usually is more hurried by his work in the spring than he ought to be, in order to avoid having his crops caught by the frost and snow. It should be the object of the farmer to have his necessary labour as nearly equalized through the season as possible, and thus avoid all pressures at inconvenient seasons of the year. Experience shows that the farmer in most cases, has more leisure hours in the fall of the year than at any other time, and he who would work it right, should employ this time in advancing his *next spring's work*—for such, fall ploughing emphatically is—and thus preventing the pressure of business then usually felt.

Chinese Method of Propagating Fruit Trees.—Take about two quarts of moist earth, and tie it around the limb which you wish to make a new tree of, by means of a piece of old cloth, or anything else that will keep in place. Let it remain several months, till the earth becomes full of small roots; then cut off the limb just below the parcel of earth, and set it in the ground. The small roots soon become large ones, and the limb speedily forms a productive tree. If the earth be put on a good limb in April, it would probably be fit to plant in November; though I cannot say it would not require another year. This method may, in many cases, be better than grafting, cutting off roots and planting the sprouts that run up from them, or any other method in use among us for multiplying the number of trees bearing choice kinds of apples or other fruits.

For the Farmers' Cabinet.

The Sun.

"Thou Sun, both eye and soul of this great world!"

Mr. Editor,—The exquisite little gem at page 300 of the Cabinet for last month, on the subject of Sunrise, I read on Sunday morning last, on the banks of the Brandywine, just as that glorious luminary made his appearance in the east, and for which rich treat I had waited half an hour: but it is quite out of my power to say with what ecstasy I worshipped at the shrine of Nature, or to describe the holy awe by which I felt entranced. The *service* was the most glorious that I had ever joined in, the *hymn* on the occasion being Horace Smith's, to the Flowers—see p. 285, 3d vol. of the Cabinet—which was chaunted throughout, without omitting a verse or a line! The organ, in the absence of *thunder*, being the deep lowing of the cattle on the surrounding hills, as they "saluted and welcomed in the rising morn," the birds furnishing out the symphony! Oh, the opportunity was indeed heavenly! Of a truth, "the man that misses sunrise loses the sweetest part of his existence."

The present season, like the past winter, has been remarkably friendly to vegetation—what now, indeed, has become of the millions of blight with which the wheat has been afflicted for past years? All are passed away, without the least intervention of man or the influence of the moon; the sun alone may be said to have accomplished the whole business, for without his enlivening rays, all would have been chaos. No wonder that whole nations, in the absence of the knowledge of "Him who made the Sun," should bow down and worship him at his approach. But although no one is a more fervent admirer of nature than I am, I cannot perform the service aright, without the aid of that blessed book by which I am taught my duty to its Maker as well as to my fellow-creatures—to "do unto others as I would they should do to me; to forgive my enemies, and do good to them that despitefully use me, rendering good for evil." No, nature and revelation must go hand in hand, and that which God has so intimately joined together, must not by man be put asunder.

The poet beautifully expresses the intimate and sacred union, when he says:

The rolling Sun, the changing light,
And nights and days thy pow'r confess;
But the blest volume Thou hast writ,
Reveals thy justice and thy grace.

Oh! like the Sun may I fulfil,
Th' appointed duties of the day;
With ready mind and active will,
March on and keep the heav'nly way!

M.

Daniell's New Artificial Manure.

At length we have notice of the mode in which this new mixture is formed. The ingredients are as follow. Any wood mechanically reduced to powder — in plain words — sawdust: this is the basis, and it is to be thoroughly saturated with bituminous matters, of all, or any kind; to this is to be added small proportions of soda and quick-lime, and a very small quantity of sulphur. The principles on which this compound is formed, appear, at first, rather obscure, but one thing is apparent, it is an attempt to make an artificial bituminous coal, and to keep this in a state of slow combustion with only the substitution of soda for the potash of the wood, and the addition of quick-lime. The proportions are not told, nor how long the compost is to remain before used, nor what the bituminous matters are; the only additional information is, that in using, it should be buried two or three inches under the surface of the soil, to prevent the evaporation of the volatile, and valuable parts. Mr. Hall produced a sample of the manure—a coarse, black powder, having a strong smell, somewhat resembling coal tar. Samples of the wheat grown by Mr. Daniell were also exhibited; and it was stated, in reply to questions, that the crops produced were greater in quantity, better in quality and weight, and produced with one-third the ordinary quantity of seed. If this new manure will give us artificial coal, which will, *of itself*, enter into slow combustion,* and furnish vegetables with its ammoniacal product, by degrees as required, it must be of immense importance to agriculture.

The value of bituminous soot as a manure has never been doubted, but, like many other manures, it has too often been applied in such large quantities, or in such strong solutions, as have rendered it injurious instead of beneficial. Bituminous coal contains from 13 to 16 per cent. of nitrogen or azote, and from 4 to 12 per cent. of hydrogen. When coal is burnt, these two gases unite and form ammonia; when burnt in the open air, the ammonia goes partly into the atmosphere, and is partly condensed in the soot; but when burnt in retorts, for the purpose of affording gas for illumination, the ammonia is dissolved in the liquor used for purifying the gas, and is called the ammoniacal liquor of gas-works. The manure will probably be about one-third the price of bone-dust.

The following account of it was given to the Royal Agricultural Society, and is extracted from the Boston Courier.—*New. Gen. Far.*

* By this, are we to understand spontaneous combustion? We would also ask, *how* is soda to be *substituted* for the potash already contained in the wood, and for what purpose is the exchange to be made from one alkali to another? or rather, where is the necessity for the addition of soda at all? Ed.

"It had long been a subject of inquiry, what is the food of plants, how are they supplied, and what are the elements of their growth? There was every reason to believe that a reply could be now given of a more satisfactory nature than had ever been hitherto known; besides which, by the discovery of Mr. Daniell, a most important corroboration had been obtained of what had been considered the elements of vegetable growth; those elements were carbon or charcoal, hydrogen or inflammable gas, oxygen or vital air, and nitrogen. All these elements existed in the atmosphere, in combination with other elements, in which state they were found to be the sources of vegetable development. It was known to persons accustomed to rural pursuits, that the heaps of vegetable substances collected for the purposes of manure, during the process of decomposition became greatly reduced in bulk and weight. If they investigated the causes of this reduction, they would find that it was occasioned by the evaporation of the carbonic acid and ammonia, the principal sources of nutriment to plants. The discovery of Mr. Daniell contained all the elements of vegetable growth. It did not supply new elements, but the same derived from other sources. It was known, that by combustion substances were rapidly decomposed, and its operation produced the elements of vegetable growth. There were on the earth numerous plants which were apparently useless, but it was a principle in nature that nothing should be lost, and they were capable of a reduction into their elements, and being made the means of vegetable growth in other forms. The discovery of Mr. Daniell was suggested by the fact that, while burning vegetables, he observed that the ashes became blackened by the surrounding smoke, and when used in that state were very fertilizing. This led him to investigate the cause, and as the result of his investigation he had produced the new manure, the elements of which were carbon and ammonia. With it the principal properties would not fly off during decomposition, as that would take place in the earth. Among other advantages, it was light in weight, cheap, and capable of being produced in any quantity.

"This manure has been applied by the discoverer to his own crops, on three acres of poor land, in an elevated situation, on some of which he has grown wheat four successive years with improving results each year; its good effects are therefore founded upon experience, personal observation, and the testimony of other observers competent to judge. From the nature of the manure, it is applicable, with some variations in its composition, to every kind of crop. It is not a stimulating manure, in the ordinary sense of the word—that is, it will not have a tendency to call into activity the existing resources in the soil—but its direct effect is to convey to the soil the direct nutriment of future growth. This effect is produced by the supply of ammonia to the soil in substances calculated to retain it for a time—to again absorb it from the atmosphere—as they give it out to plants during their growth. It will probably prevent also the ravages of insects.

Its mode of application may be various, according to the circumstances of the crops. The application by drill is conducive to economy of the manure, and a direct application to the infant plant, as is the case with bone-dust. Care, however, must be taken that it is not applied too directly to the plant, or without some portion of mould around it. This is the only precaution needed to avoid danger in its use. There is one required to prevent waste, as it is of a volatile character; that is, to place it several inches in the earth as the earth will absorb and retain the volatile and valuable part. For grass lands, for similar reasons, it will be well to have it mixed with a considerable portion of ordinary unvalued mould. If the manure, as manufactured, be mixed with an equal bulk of mould, it will be perfectly safe for application; or if the mould of the field be stirred over it, when drilled, it will suffice. The quantity to be used will vary according to the crop, like any other manure. About twenty-four bushels per acre are recommended for wheat, and half as much more, or thirty-six bushels, might be beneficially applied for turnips or mangel-wurtzel. The most beneficial quantities will easily be ascertained by the intelligent farmer."

Home.

THE only fountain in the wilderness of life where man drinks of water totally unmixed with bitterness, is that which gushes up in the calm and steady recess of domestic life. Pleasure may heat the heart with artificial excitement; ambition may delude it with golden dreams; war may eradicate its fine fibres and diminish its sensitiveness, but it is only domestic love that can render it truly happy.

WHEN you see a man who curses when it rains, frets when a fog occurs, and smiles only when the sun shines, be sure that such an one can never bear up with fortitude against the attacks of misfortune, nor stand with equanimity the marvellous changes of our daily life.

The Wife.

"While the unlettered nations of the earth have either deified woman as a goddess or debased her as a slave, we are delighted to accept her as the honoured companion of our homes and the pride and ornament of our assemblies. At her feet do we learn lessons of mental refinement and moral sensibility; and this is no ideal compliment or vain pretence, to foster her pride or feed her vanity, but the sincere conviction of every mind susceptible of truth. When the tide of woman's influence is turned to the upbuilding of our societies, of whatever name, we ask no surer token of success; *with it*, our highest anticipations are realized—*without it*, our strongest efforts are paralyzed. I care not how great, how difficult and discouraging the enterprise; woman has courage and perseverance adequate to its accomplishment."—Col. A. Morton.

There is something enigmatical in the relative position of the wife, and yet the lines of office and duty are distinctly drawn in nature. It perhaps may be said with truth, that she is the *equal* of her husband in nothing; in all things, she is either his superior or inferior. In physical strength, inferior; in symmetry and beauty, superior. In intellect, she has more imagination, vivacity and brilliancy; less power of reasoning and acuteness in argument; but in moral sensibility she is greatly the superior; in power of persuasion, if not argument, she holds a controlling influence. She can most readily find the way to the heart, and easily subdues it; but when she leaves the moral and gentle means of exercising control, and assumes to *command*, she must always expect to find a master. By courtesy, everything she asks will be granted, her wants will be anticipated. But when she assumes to be a man, or to take the place of a man, she transcends her sphere, and resembles a star thrown from its orbit, its laws of motion subverted, and its position doubtful. Let her, in the retired position assigned her by the gospel, be satisfied with her legitimate and proper influence, and she may appear the superior in everything praiseworthy, without exciting jealousy, and without dispute.

From her very weakness, from her purity and tenderness, from her great freedom from the causes of irritation, her husband learns to respect her decisions in morals and religion, and his conscience comes in aid of the influence she seeks to exert over him. She influences him as an angel of light and love. He may, in the pride of his heart, hate the gospel, and despise the cause of the poor, but he will go to church with *her*, and freely put his hand in his pocket to supply her charities. She is the weaker vessel, and yet she is strongest. He may rage in giant strength against the objects of his hatred, and yet let her interpose, and she holds his arm nerveless, like the arm of a child. While she is gentle, kind, affectionate, devoted, true, the mother of his children and their guardian angel, she holds him by a silken cord, which is stronger than a cable, stronger than the chains of the slave, because it entwines his heart, it binds the affections, which are the seat and motive power of the will. While, therefore, in the pride of his power, he opposes force by force, toward *her* he is all kindness and condescension. But let her assume the tone of a dictator, and of masculine command; let her talk of "woman's rights," and write a code of laws to define them anywhere but in *the heart* —the common law of the soul—and she appears shorn of her locks, which are "her ornaments;" she abjures her womanhood, she affects the man, and must *contend* with men.

No—the proper sphere of woman is *home*. Her great office in the social system is to make that home a happy one to her husband, that his affections may centre there—that he may have no temptations to wander, and may always hasten to return to it. Let her train her children so that they may be the pride of their father, so that he may love to own them, and be not ashamed to show them as the jewels of his country. Let her always stand ready to receive him with complacency after his conflicts with the world, when his brow is knit with care, when his heart has been rudely convulsed by contact with treachery, dishonesty, or abuse, and his passions are striving for mastery; then, from her still and quiet retreat, from her communion with the innocent spirits of her nursery, from her closet of prayer, which opens to heaven, let her meet him like a ministering angel, and he will lie at her feet like a tamed lion; he will imbibe from her something of her own spirit, and his spirit will be chastened under such a ministry.

Here lies the great strength of the wife: here is her high, honourable, and honoured sphere of action—where men are made, moulded, controlled—not where they contend, and cherish the angry passions. Does she seek for honour? It lies in the honour she renders to her husband; in her children, educated, and led to paths of usefulness and heaven; in the domestic arrangements, the admiration of all. Does she seek for happiness? Where can she find it but in a peaceful home! The wife was appointed to make a *home* for man, to form a centre for his affections, and bind them there; to act constantly as oil upon the troubled waters of life.

I lately saw a scene for a painter, exemplifying most clearly the position of the wife. Two men had become violently enraged, and sought each other with deadly weapons. I trembled for the issue. But as they came near, their arms fell powerless, and their voices of anger softened. I pressed through the crowd, and saw a female figure, like the

presence-angel, standing between them. She was the wife of the one and the sister of the other. She spake not—but she had power. She led her husband home, and in the morning he went with a brother's heart and sought a reconciliation.—*The Patriarch.*

For the Farmers' Cabinet.

Pulverization of Soils.

Mr. Editor,—Every day adds to the conviction, that the preparation for our crops is most defective, and that not one-half the necessary labour is expended on this first and most important of all our operations. Let any one but go into an examination of the crops of oats, which are now beginning to show the balks in ploughing and the unequal and ineffectual coverings by the harrow, and he will not be at all surprised at the very general complaint of the uncertainty of a crop which, in other countries, is at once the safest, and most convenient and profitable that is grown: no wonder that they are generally down before they are ripe, and exhibit an inequality of growth that would otherwise be unaccountable. It is easily perceived that the almost universal custom is, to sow the land without first harrowing it, under the persuasion that otherwise, it would be impossible to cover the seed: this accounts for the many broad patches which are now to be seen without a plant, while the adjoining hollows are literally heaped with starved plants, without space for thousands of them to grow, and where they choak each other. But the evil commences with the ploughing of the land, which, being after corn and easily broken up, it is thought a useless labour to turn in small furrows, the very largest being easily broken down by the harrows, which to the eye makes all smooth—it is only to point to the fields, now that the crop has sprung up, to be convinced of the absolute robbery of the land and the insanity of the practice. But no hope for the better can be entertained, while it is thought that agriculture will not pay for good management—that it *never can*, while such dishonesty is practised, is certain; but that it never *would*, if a better system were adopted, is a libel on common sense and reason. If on stiff soils the seed-oats were put in with the cultivator, I am convinced they would be found to pay the extra expense ten times over; while on light soils, the practice would be found equally beneficial, burying the seed deeper, and giving it a more compact bed, from which it would spring more regularly and of stronger growth, and when, too, more seed per acre might be allowed, without fear that the crop would fall before ripening. On a more careful pulverization of our soils, more depends than almost any of us can imagine; and I am very much pleased with some remarks which I find in an address delivered by D. Thomas, of Aurora, before the Agricultural Society at Auburn, N. Y., which I copy for insertion in the Cabinet: they are simple, and easy to be understood and practised.

Your Subscriber.

May 9, 1842.

"Jethro Tull, observing the extraordinary effects of high culture, concluded that plants fed wholly on mellow earth, and Duhamel adopted the same opinion—if we were to follow their example, making plenty of fine earth, for the plants, not to *feed* on but to *drink* from,* our crops might be greatly increased. I am satisfied that we are too saving of our harrows: thirty years ago there was a method of ploughing in this country, called 'cut and cover,' the furrow-slice covering the space where a furrow ought to have been; and I am apprehensive that our ideas of harrowing were learned in the same school, for when grain is sown, is it not the prevailing opinion that it is harrowed enough when the seed is covered? I have had land harrowed sixteen times in a place, and was satisfied the labour was well applied. For beets, corn, potatoes, &c., what would be the effect of turning in a heavy coat of manure, harrowing twice, and repeating the operations of ploughing and harrowing four times more, adding each time to the depth of the soil? I have not yet performed the experiment exactly, but the nearer I have approached to it, the better has been the crop. Thorough culture would seem to require that the lumps of earth should be so broken that the roots can wander and penetrate in every direction in search after food and moisture, and that every drop, even of a summer shower, should be caught and retained for future use. Hard and thin soils have some resemblance to a dish turned bottom upwards."

Poetry of Book-Keeping.

Attentive be, and I 'll impart
What constitutes the accountant's art.
This rule is clear; what I receive
I debtor make to what I give.
I debit Stock with all my debts,
And credit it for my effects.
The goods I buy I debtor make
To him from whom those goods I take;
Unless in ready cash I pay,
Then credit what I paid away.
For what I lose or make, 'tis plain,
I debit Loss and credit Gain.
The debtor's place is my left hand,
Creditor on my right must stand.
If to these axioms you 'll attend,
Book-keeping you 'll soon comprehend,
And double entry you will find
Elucidated to your mind.

Honduras Obs.

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* This, the subsoil plough is doing, precisely.—Ed.

For the Farmers' Cabinet.

The Hay Crop.

Mr. Editor,—We all grow the same articles for market, and then complain we want a market for our produce. If we were to look abroad, I think we could find that there are still others which would remunerate a fair outlay of expenses, and be the means of relieving not only ourselves but our neighbours, by drawing off a portion of the articles that are so commonly, so universally exposed for sale—the everlasting corn, wheat and oats—wheat, oats and corn of a country many miles in extent. In the last number of that most valuable agricultural periodical, "The Farmers' Register," published in Virginia, I find a paper on this subject written by the Rev. J. H. Turner, which has interested me exceedingly, and brought to my remembrance, that the late Mr. George Walker, of Holmesburg, embraced the above mode of cultivation in a considerable degree, and experienced from it profit, and much relief in the business of *disposing of his crop*—a difficulty which is now so much complained of—his method being, to dispose of his hay at the market, where its superior quality always commanded the best price, as well as a ready sale. Mr. Turner's reasoning is so simple and so just, that I think it will tempt others to go and do likewise. Speaking of his reflections on this subject on first coming to his farm, he says:

"In determining on a main crop, it has been an object with me to fix on that one in which I could most nearly enjoy a monopoly; and as hay is a bulky article compared with its weight and price—so much so, that it will not bear transportation to any considerable distance, I have made that my chief crop; all my farming operations are therefore subservient to the cultivation of the grass crop. And in looking back to the time when I commenced farming, I think it a little remarkable, that without any previous experience to guide me, I should fix on the very crop which, upon trial for fifteen years, I am still convinced was the very best for me to cultivate. I had observed, that but little hay was brought to market from the neighbourhood, and that most of that little was of inferior quality; those who then kept large numbers of horses depending almost entirely upon the North for their supplies of hay; and this was with them a matter of necessity, for the surrounding country supplied perhaps not one-twentieth part of what was needed. Observing this, I concluded that if I could succeed in raising hay of a good quality, I should have no difficulty in finding a market for it; nor in this have I been disappointed, for I have never, in any instance, failed in disposing of my whole crop, and generally at fair remunerating prices; and even at this time, when every body is complaining of a scarcity of money, hay commands a more ready and a better price than almost any other article. Some of my neighbours have expressed the apprehension that the market would soon be overstocked, and that therefore the price would go down, but I entertain no such apprehension; the first effect arising from the increased quantity at home, will be to arrest the importation from abroad. At present there is still coming a considerable quantity from the North, and as long as this is the case, I have no fear that *good hay* will be a drug upon my hands; indeed I am pleased to see that vigorous efforts are now making greatly to increase this crop, and I hope that the time is just at hand, when, in addition to our neighbourhood supplies, we shall see large quantities borne to market on our canal and railroad; for it is quite time that Virginia should assert her own independence—she has been too long dependent upon the North for her hay, and upon the West for her pork.

"But the main point remains yet to be touched—what is the *value* of this crop? I answer, I know no crop that, upon the whole, requires less labour, is more certain, and at the same time yields a fairer compensation. The chinch-bug and the Hessian-fly, which prey upon our corn and wheat, never touch this crop, nor is it subject to the depredations of any other destructive insect; give it rich land well prepared and a moderate degree of moisture, and this is all that it asks. If, therefore, it be subject to fewer casualties, and when produced commands a fair and ready market, I must pronounce it a good crop. But besides these recommendations, there is another which, in my opinion, greatly enhances its value, and that is, I regard it as less exhausting than most of our other crops, but I pretend not, that this, in common with all other crops that are removed from the land, is not an exhauster; but then, it ought to be recollected that other crops, such as corn, wheat, oats, &c., when removed, make no effort to recruit themselves; they leave the land, with the exception of a little stubble, entirely naked; but this is not the case with the grasses, for besides the stubble, they begin immediately to renew themselves, and continue so doing, until arrested by severe frosts; so that the aftermath on good land, especially in clover, is often nearly equal to the first crop; and this *second* crop, if left to fall and rot on the ground, must contribute materially towards repairing the exhaustion of the first crop; and this, in my opinion, is the true reason why grass exhausts less than other crops. In this view of the subject I am greatly strengthened by Liebig and other celebrated writers on the subject of agriculture; they

say, and I think with much plausibility, that the very best manure for any particular species of vegetation is that which is derived from itself—leaves, for instance, for wood or forest trees, and wheat-straw for growing wheat; and if this be the case, then the second grass-crop, containing as it does the materials of the first, must be a valuable manure for itself; and this, I think, is *a strong argument for banishing cattle and all other depredators from our fields.*"

Is it to be understood, that Mr. Turner recommends the second crop of grass to fall and rot on the land as manure for another first crop? or does he merely argue, that such a course would answer the best purpose, on the French theory, that "Nature has within herself the power of renovation?" To the latter I have no objection, but should suspect that the former mode would be materially to injure the quality of the hay of the first crop, as it would not be possible to mow it close, without cutting up with it much of the second crop in the shape of old fog, in a state of decomposition, the mouldy smell and taste of which would be highly detrimental to the hay. I would much rather pass the second crop through the bowels of the stock, take the dung or "evacuations" periodically into the fields, and mix them at the rate of four or five loads of muck or fresh earth to one of dung, and after fermentation, turn all up and add a portion of lime, carrying the compost abroad in the spring as a top-dressing. But this is *labour*—true, to which I should have no objection; for what was a man sent into the world for, but to labour and enjoy the fruits of it? the richest portion of that fruit being the "looking on the labour of his own hands." But I forget the relative positions of the countries from which we date—*here*, it is neither *disreputable* or *disagreeable to labour!*

Z.

Lancaster County, Pa., May 21, 1842.

For the Farmers' Cabinet.

Another "Farmer in Distress."

How many are the ills that "flesh is heir to!"

The account of the farmer in the last number of the Cabinet, who had at last *waked up*, and so improved his land with lime, attention to his manure heaps, good tillage, &c., as to find his milkers in the spring without *pasture*, as all his fields were *now mowable*, reminds me of a couple of my neighbours, who had also *their* troubles. They were similar in character to *his*, to whom I have just referred, all having their origin in the honesty of old mother earth, and in her strong disposition to repay, with interest, the labour used in coaxing her to pour forth the exhaustless riches of her bosom.

"Heighho—neighbour G.," said E., one frosty morning, as he passed through his neighbour's corn-field, and found him beating his hands against his ribs to keep up the circulation—"how is the corn-crop on your side the fence this fall? Mine is very fine; I calculate upon 70 bushels to the acre." "Oh," said his friend, "I shall have quite that much: indeed, if you look at the heaps, with three or four baskets in them, you 'll say I 'll have 80 or 85 bushels. But, dear me! I don't know what upon earth I shall do with my hogs; I can't fat them: it seems as if there was always some trouble or other in store for me; some *crook* falling to my lot; my pumpkins are all gone, and I shall have no *offal corn to fat my porkers with!* I manured my ground well in the spring, and gave my corn a good sprinkling of ashes and plaster when I first harrowed it, and then it looked so well, that I couldn't help tending it nicely all summer, and now, it 's all sound and hard, and I 'm harassed not a little to know how to get my hogs fat!" "Oh well, neighbour G.," said E., "you 're not solitary in your troubles, for I 've been brooding over mine, ever since harvest. I 've limed, and marled my land, and picked up so many hints from the 'Cabinet,' that Cousin Humphrey persuaded us both, you know, to subscribe for, that last summer I cut so much more first-rate hay than I 've been used to, that my barns would not hold more than half of it; if I go on this way, I shall be obliged to put up more hay-houses, and buy more stock! I 'most wish we had left that Farmers' Cabinet alone; it's got us both into trouble, you see." I came along just in time to hear this conversation, and we all made ourselves merry over the "distresses" of my neighbours, and they concluded I should be *spokesman* and have it put in print—with this *sage* advice to all brother farmers who can't afford to put up additional buildings for their increased crops, nor to fatten their porkers on *sound corn*—namely, to be careful how they enrich their farms, for land is honest, and will pay; and by all means not to subscribe for the Farmers' Cabinet!

Humphrey.

Potatoe Oats.—Mr. G. B. Smith, of Baltimore, is convinced that the potatoe oat is an inferior food for horses; it is said that more of this variety than of any other passes through the animal undigested, which is supposed to arise from its being more difficult to masticate. Whatever be the cause of the evil, the evil itself is not questioned; consequently, horse-keepers decline to purchase them—the purchasers of forage for the army horses in particular—at any price; it is therefore thought advisable to caution farmers against growing them.

Experiments with recently introduced Manures.

By John Grey, Esq., Dilston, Northumberland, (Eng.)

As the results of experiments already before the public are seen to vary much, both from the quality of the soil and the description of crop to which these manures have been applied, and as it seems necessary to bring under review a great number of such results, for the purpose of determining with reasonable certainty, the kind of land and of crop to which these several manures are to be applied with full success, the following details may perhaps be considered not unworthy public notice.

On the 28th of April, 1840, I sowed upon each alternate ridge of a plot of land consisting of four acres of good gravelly loam, which had lain three years in grass and was thickly covered with plants, nitrate of soda at the rate of 112 lbs. per acre, having ascertained the exact contents of each ridge and divided the nitrate accurately into the right proportions. To some of the alternate ridges I applied gypsum, at the rate of ten bushels per acre. To one ridge, I applied both the nitrate and gypsum; and three ridges were left without any application whatever. The grass, to which the nitrate was applied, in a few days assumed a darker colour than the other; rose quickly above it in height, came earlier to seed, and was sooner fit for cutting. The plot was all mown and made into hay at the same time, great attention being paid to keep the produce of each of the ridges intended for the experiment, distinct. The following is the weight of hay produced by each plot; the aftermath of those ridges to which the nitrate was applied, was obviously better than the others.

1. 112 square yards without any manure, produced 9 stones 4 lbs. of hay, weighed when newly made: equal to 2 tons 81 stones per acre.

2. 112 square yards, to which gypsum had been applied at the rate of 10 bushels per acre, gave exactly the same result; so that no benefit whatever arose from its use in this instance. It must be remembered, however, that the grasses are of the ordinary kinds used in pasture, that is, white clover, rye-grass, timothy, &c., but without red clover, to which gypsum is known to be beneficial.

3. 112 square yards, to which nitrate of soda had been applied at the rate of 112 lb. per acre, produced 14 stones 7 lbs.; equal to 3 tons 146 stones per acre, being an increase of 1 ton 65 stones, over Nos. 1 and 2.

4. 112 square yards, to which both nitrate of soda and gypsum had been applied in the above quantities, produced 14 stones; equal to 3 tons 125 stones per acre, and 21 stones less than the produce where nitrate alone was applied. The cost of the nitrate and carriage was 22 shillings per 112 lbs., and the increased value of hay per acre, as it stood in the field, would be from four to five pounds sterling.

From the many experiments which have been made, and which have all proved more or less beneficial, no doubt can be entertained that nitrate of soda is generally efficacious in the production of grass; but several experiments may yet be necessary to ascertain on which descriptions of soil and to what class of plants it is most so, and to what particular stage of their growth it is to be applied with the greatest benefit. I am inclined to think, that it ought not to be sown upon the grass until that has risen considerably from the ground, and the leaves are sufficiently evolved to derive all the benefit. I applied nitrate of soda to a row of potatoes at an early period of their growth; the tops soon showed the effect, and they far outstripped the adjoining rows in growth; but when the potatoes were taken up, the produce of that row was found to be less than that of the others, both in weight and measure. Now, the first action of the potatoe plant is to throw out its top; the tubers make their growth at a later period; it seems, therefore, in this instance, that the stimulus of the nitrate had expended itself in the earlier process, and that, instead of being benefited, the tubers had suffered by the application, probably from the greater shade and weight of the top. It is possible, that if the drills had been much wider, so as to admit of sufficient air, the result might have been different.

I applied nitrate and gypsum to alternate ridges of different kinds of grain and at various stages of its growth, but the quantity of rain that fell in this part of the country, both previous to, and during the time of harvest, had the effect of producing so much straw and of laying the corn so flat, that it was found difficult to cut the plots so as to keep the produce distinct, and was also in other respects so unfavourable to the experiment, that I cannot reckon upon the result being correct and satisfactory. In one case, where the barley was very bulky and in consequence much lodged, the grass seeds were found to be weak and worse than in other parts of the field, but in another instance, the reverse of this was the case. The crop in the latter case was a thin one of winter wheat, on poor clay land. Four ridges were sown with nitrate when the wheat was about a foot high; little effect was perceptible during its growth, save in a darker shade which it assumed, as is common to all crops when nitrate is applied; and on being cut, those ridges produced so few sheaves more than the others, as did not induce me to keep their produce separate;

but in the spring of the following year, the new grasses upon them were found to be much better than upon any other in the field. The pasture was heavily stocked with ewes and lambs, and eaten bare, the sheep giving these ridges the preference; and when the lambs were weaned, the pasture was cleared of stock for a fortnight. When the same thing was repeated, the grass on these ridges again took considerably the lead of all the rest, and was again preferred by the sheep when they returned to it. This was a result which I had not anticipated, and proves, either that the effect of the nitrate continued in operation during the following season, or that its effect in the first year upon the grass was such, as to nourish and strengthen the plants so much as to cause them to stand better through the winter and to shoot much more vigorously in the spring—the latter is, I think, the most reasonable.

In the beginning of May last, I applied nitrate of soda and a mixture of nitrate and manganese to equal quantities of new grass-land intended for mowing, leaving a portion without any dressing. The land was well covered with plants of red and white clover and rye-grass, but not of first-rate quality; both portions to which the dressings were applied soon assumed a dark appearance and rapid growth, the difference being perceptible at any distance. The portions were cut, and the produce of each carefully kept distinct, and weighed when made into hay and put up in pikes, of which the following is the result:

Description of Dressing.	Nit. of Soda 112 lbs.	Mang. & Nit. eq. quan. 140 lbs.	No Dressing.
Weight of hay per acre	3 tons 85 st.	3 tons 21 st.	2 tons 37 st.
Value of hay per acre at £3 per ton	£10 13s. 0d.	£9 7s. 10½d.	£6 13s. 10½d.
Cost of each dressing per acre	1 6 0	1 1 0	
Value of hay per acre, deducting expense of dressing	£9 7s. 0d.	£8 6s. 10½d.	£6 13s. 10½d.

When the aftermath had begun to shoot up, I applied the same dressings as above, and also a mixture of guano and soil to portions of the land that had not been dressed; the effects as to colour and growth were the same as in the previous experiment with the nitrate and mixture of nitrate and manganese; that from the guano was less apparent and slower, but still, the growth was greater than when nothing was applied to the aftermath; one thing being very obvious, that the stock, when put on the field, gave a great preference to the portions which had received the saline dressings, over that to which the guano had been applied, as well as to that which had nothing. I then applied the three dressings as above stated, to rows of turnips after they had received the second hoeing; the effect as to colour and growth was the same, and in the same proportions as to the clover fog; but the final result remains to be proved. The same dressings were applied to rape or coleseed, sown on bone manure when the crop was three inches high, and here the nitrate and mixture produced the most decided effect that I had yet seen, for within a month these rows had grown to twice the height of the rest of the field, and were covered closely over the intervals, bearing fully double the weight of produce. Those rows dressed with guano were better than those which had nothing, but much inferior to that to which nitre had been applied. Sheep were put upon that part of the field on the 24th of August, and in a week had eaten the rows, done with nitrate and nitrate and manganese, close to the ground; while those done with guano, and those left undone, were hardly touched—a decided proof, that the application of nitrate to such plants, has the effect of not only increasing the quantity to a great extent, but of rendering it more palatable to animals, and, no doubt, in an equal degree more nutritious.

I found nitrate very beneficial to the growth of tares, and extremely so, to six acres of the second year's grass, the effect being greater and more rapid than upon the first year's clover; but this land being in pasture, the increased produce could not be brought to the test of actual weight of hay; but the stock being kept off it for a week after sowing the nitrate, it acquired such a growth, as to keep afterwards, in comparison with other land, at the rate of five sheep per acre instead of three.

My experiments of nitrate upon grain, both the last year and this, have been unsuccessful; it stimulated a great growth of straw, and in consequence of much rain before the harvest, those portions have been laid and much injured, producing great bulk, but coarse in straw and unproductive in grain; and even in cases where both barley and oats seemed in no danger of being too bulky and were not lodged, a second growth has been produced, and the crop is now being cut, full of green and immature shoots, while the perfect grain does not appear more in quantity nor so good in quality as that which had no nitrate. As rapid growth of straw with a heavy shoot-blade just before the appearance

of the ear is always attended with much risk, and as nitrate produces exactly that effect if applied to grain after it has grown to the height of 12 or 15 inches from the ground, it must always be attended, more or less, with danger; and, on the other hand, when applied very early and before the plants had covered the ground, it produced no effect at all.

With respect to Guano, I am sensible that the result of these experiments forms no test of its value as manure. Being the produce of sea-fowl, accumulated for ages on the rocky islands of the Pacific Ocean, which fowls feed on fish, it must contain a large portion of organic matter of a rich and stimulating character, and ought to be applied mixed with ashes, charcoal, or some other substance, so as to be accessible by the roots of plants; but as I could not obtain any at a proper season for using it in that way, I determined to try it as a top-dressing in the same way as the others.

The results of numerous experiments which I have made with nitrate of soda, lead me to the determination to use it as much as possible on grass and green crops, but cautiously on grain crops, and only in such situations as to run no risk, be the weather as it may, of the grain being lodged from too great a growth of straw. I have satisfied myself, that I can obtain the requisite quantity of hay upon two-thirds, or rather less, of the land which I have hitherto assigned to it, by the application of nitrate of soda to the grass, so that I have one-third of the land at liberty to feed sheep. I am also satisfied, that its application to pasture-land increased the produce, at any rate by one-third; and to rape or cole-seed, in one instance at least, by one-half: the consequence of which must be, an extra production in equal proportions, of mutton and wool, and an additional return of manure from the sheep to the land, which will produce its effects upon the succeeding crops of grain, not by stimulating a rapid growth at any particular stage, but by entering gradually and regularly into the whole process, from the germination of the seed onward, to the maturity of the crop.

For the Farmers' Cabinet.

Subsoiling.

Mr. Editor,—I owe a tribute to the Cabinet for the introduction of the subsoil plough into this part of the country: by means of it I have cultivated a field of ten acres for corn in a way that has really delighted me, and I am willing to credit its "promise to pay" at 90 days, in perfect confidence that its note will not be dishonoured. My land is strong, and so is my team—I therefore ventured upon the second large size of plough, convinced as I am, that we have long been in error with respect to the size of ploughs best suited to the cultivation of the soil, they being too small for general purposes; lifting out in strong or stony soils, and sliding away in those that are light or sandy, against which they form no resistance. I therefore chose a Prouty subsoil plough, No. 2, and put it to the depth of about a foot, after turning seven inches of the top-furrow, when the way in which it operated—lifting the whole width of the bottom of the furrow, which on falling back became broken and pulverized, fit for the reception of the most delicate crops, into which they might send their fibres in search of moisture to the depth of 12 inches in the gravelly subsoil, "forming a perfect drain in wet weather, and a retentive medium in a season of drought," as has often been pointed out—has convinced me that no invention at all comparable to it, at least in theory, has been introduced to the agricultural world within my own memory, which is now pretty extended.

But how is it, in the name of common sense and all that is rational, that we hear of a *single-horse* subsoil plough being constructed! Ah! there it is—we are never content until we refine away, under the idea of saving expense and labour, all that is valuable and useful in our agricultural improvements; thus have light ploughs been introduced at about four dollars expense, which only scratch the ground; small cultivators to be used by hand; drills that may be denominated toys; and subsoil ploughs—whose province it ought to be to open a retentive and strong subsoil to the greatest depth, and which are used in England, where they were first invented, with the force of six or eight oxen or horses, the more expense incurred, the more profitable result—for the use of a single horse; and that, of course, a small one, on the principle the less expense incurred, the greater the gain! Thus, the greatest enemy to subsoiling will be found amongst its friends, as has usually been the case in other things—witness merino sheep, multicaulis trees, and Berkshire hogs—to which I fear may soon be added other *cidevant* favourites, that have been refined to sublimation. And yet, all these, when united, are but of little importance, when compared to the injury that will be sure to follow the use of the single-horse subsoil plough, which is destined to bring the practice of subsoiling, the greatest improvement of the age, into contempt; for we shall soon hear that some one has tried it and has found no benefit whatever from its use; the worst part of it being, the impossibility of ascertaining the depth to which it had been carried, possibly not more than a couple of inches, at which depth the plough will be found to break up a portion only of the width

of the furrow, it being made narrow and sharp, for the purpose of forcing its way into a retentive or stony subsoil; but which at the depth of ten inches or a foot, will be found capable of breaking the whole width, lifting it up like a little earthquake, and mashing it completely in its fall. I declare it makes one feel savage-like, to find to what extent our parsimonious habits are carrying us; the *saving of expense* being a besetting sin, which indeed, needs to be repented of; but which we scarcely hear of, except in the profession of agriculture. The manufacturer, the machinist, the mariner and the commercial man, are content to commit their substance to the guidance of their several occupations, calculating that the more capital is judiciously employed, the greater will be their profits; while poor agriculture—the only business that will not pay interest for capital invested, is doomed to be cheated, reviled and degraded by every species of fraud and chicanery, not even being thought worthy to be entrusted with skill, capital, or enterprise, and yet, expected to furnish "*something for nothing.*" But I will not despair; I will do my duty and debit my crops with the expense, and when a pair of strong horses are not sufficient to put my subsoil plough down to the beam, why I will put on four, and acquaint you with the result. In the meantime, I have debited the crop of corn on my ten acres with the cost of the new plough—eleven dollars—and do not despair of making 100 per cent. profit upon that, the present year. R. P.

Montgomery Co., May 25, 1842.

For the Farmers' Cabinet.

"Chemistry applied to Agriculture."

Mr. Editor,—I transcribe and forward for insertion in the future pages of the Cabinet, extracts from "Liebig's Chemistry applied to Agriculture," a work which is about to create a new era in the science of agriculture, which every farmer cannot too attentively peruse, and which none can read without being struck with the justice and truth of many of his views, explaining clearly as they do, many phenomena heretofore inexplicable, and offering a guide to future operations in that science so important to the well-being of mankind.

"It is impossible," says Professor Lindly, "for any one acquainted with gardening (and what is farming but gardening on a large scale) not to perceive the immense importance of these considerations, (speaking of his explanation of the necessity of a rotation of crops), which show, that by adopting the modern notion, that the action of soil is chiefly mechanical, the science of horticulture has been carried *backward* instead of being *advanced*; and that the most careful examinations of the chemical nature both of the soil in which a plant grows and of the plant itself, must be the foundation of all exact and economical methods of cultivation."

Professor Liebig says: "Any great improvement in this most important of all arts is inconceivable without a deeper and more perfect acquaintance with the substances which nourish plants, and with the sources from whence they are derived; and no other cause can be discovered to account for the fluctuating and uncertain state of our knowledge on this subject up to the present time, than that modern physiology has not kept pace with the rapid progress of chemistry." Speaking of the apathy and supineness of those who should be most interested in every discovery of the chemist, every new light thrown upon the art of culture, he says: "Agriculture has hitherto never sought aid from chemical principles, based on the knowledge of those substances which plants extract from the soil on which they grow, and of those restored to the soil by means of manure. The discovery of such principles will be the task of a future generation, for what can be expected from the present, which recoils, with seeming distrust and aversion, from all means of assistance offered it by chemistry, and which does not understand the art of making a rational application of chemical discoveries?" S. T.

Cranberries.—Cultivated cranberries were exhibited by S. Bates, of Billingham, Norfolk county, Mass., which were grown on his own land. He states that low land is best for them, prepared in the same manner as for grain, the wild cranberry being transplanted into it in rows 20 inches apart. At first they require a slight hoeing; afterwards they spread and cover the ground, producing crops annually thereafter without farther culture; and in this condition they are more productive, the fruit being larger and finer than in their wild state, the yield being from 200 to 300 bushels per acre, and worth on an average in the Boston market, one dollar a bushel. A damp soil, or when wet predominates, has generally been considered essential, but Mr. B. thinks this is not necessary to their successful cultivation; early spring is the best time for transplanting.—*Mon. Vis.*

Composts.—I have tried the earth taken from ditches in the meadows, but never found any benefit from it; but when carried in large quantities into my hog-sty and barn-yard in the autumn, and turned up in the spring and used for manuring corn, &c., I have found a load of this earth-mixture as beneficial as a load of unmixed manure from the yard or hog-sty; and after a year's exposure, have never found unmixed dung better.—*Bronson.*

Notices.

We are indebted to Charles Robinson, Esq., for "Transactions of the New Haven Horticultural and Agricultural Societies for 1841," an interesting and peculiarly neatly printed work of 84 pages, showing most clearly the deep interest which these societies are creating in that intellectual part of the Union; infusing a spirit into the cultivators of the soil which will lead to the most important results.

The Horticultural Society of Pennsylvania held their monthly meeting in their large and elegant saloon, lately occupied by the Chinese Museum, on Tuesday evening, the 17th of May. The effect given to the exhibition by the playing of the fountain in the centre of the room, it would be difficult to describe—it is a luxury scarcely to be properly appreciated. The coolness and fragrance of the air, the vivid gas-light diffused amid the falling water and the profusion of flowers of every form and colour, reminded one of the eastern tales of enchantment. Amongst the vegetables exhibited were cauliflowers and potatoes of immense size, and a species of rhubarb, the Victoria, the stem of the leaf measuring 4 feet long, three leaves weighing 4 pounds. The stated meetings of the society are held on the evening of the third Tuesday of every month.

"A Popular Treatise on Vegetable Physiology," is the title of a volume of 300 pages just published, price $1. It is embellished with numerous wood-cuts, forming a valuable addition to the Farmers' library, and affording delightful reading to the younger branches of his family, instructing them in a profession of which they are destined to become the "ornaments."

We announce also, the publication of "A popular Treatise on Agricultural Chemistry, for the use of the Practical Farmer," price 62½ cents, by C. Squarry, a manual which will command attention, when the farmer shall be induced to believe that it is as reasonable for him to study *his calling* as for those belonging to what are termed "the liberal" or learned professions, the members of which never dream of success, without a severe course of "reading, reflection and application." Both these books, with all the new publications on agriculture and the sciences generally, may be had of Kimber and Sharpless, No. 50 North 4th Street, Phila.

To B. W. French, Esq. we owe obligations for a copy of the Constitution and By-Laws of the Massachusetts Horticultural Society; the report of its transactions for '39, '40, and '41, &c., a very interesting report truly.

Can any of our friends inform us where *a full-blooded Merino Buck* may be obtained?

We most readily correct the error pointed out by the Editor of the Boston Cultivator. To that excellent paper is due the very interesting article at p. 303 of our last No., on "Rotation of Forests."

A "Subscriber" is reminded, that the advocates for Durham blood, lay claim to *ease of keep*, as well as to *quick feeding*.

The First New Flour.

Col. W. Hancock, of Monroe Co., N. C., sowed his wheat on the 18th Oct., 1841; cut it on the 18th May, 1842; threshed it on the 21st; ground it and sent the flour to market on the 23d.—*Fayetteville Obs.*

Kyanized Tar for dressing Wounds in Trees.

Half an ounce of corrosive sublimate, reduced to fine powder; dissolve in alcohol, and mix with tar in an earthen pipkin containing three pints, blending the whole as intimately as possible. For giving more body to the mixture, add fuller's earth or rotten-stone powdered.

Addition to the List of Premiums offered by the Phila. Ag. Society.

For the best Durham heifer between 2 and 3 years old	$6 00
For the next best do. do.	3 00
For the best heifer of other improved breed between 2 and 3 years old	4 00
For the next best do. do.	2 00
For the best bull of other improved breed over 2 years old	8 00
For the next best do. do.	4 00

The quantity of rain which fell during the 5th month (May), 1842, was ..... 5.86 inches.
Pennsylvania Hospital, 6th mo. 1, 1842.

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